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HIGHLY-EDUCATED IMMIGRANT ENTREPRENEURS' LOCATION DECISIONS

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To the Graduate Council:

I am submitting herewith a dissertation written by Nastaran Simarasl entitled "HIGHLY-EDUCATED IMMIGRANT ENTREPRENEURS' LOCATION DECISIONS." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Business Administration.

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Dedications

To my mum, Forouz

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Abstract

In this dissertation, I draw on theories from sociology, economics, and economic geography, namely ethnic enclave theory, location theory, and heterolocalism theory to investigate factors that highly-educated immigrant entrepreneurs take into account when they decide where to locate their start-up. In doing so, I use an experimental method, conjoint analysis, on a sample of first-generation graduate students at the University of Tennessee to examine the factors that highly-educated aspiring immigrant entrepreneurs take into account when deciding about their start-up location. This dissertation is one of the first studies to bring theories from other disciplines to provide a more comprehensive understanding of highly-educated immigrant entrepreneurs' start-up location decisions. Results show that location-specific costs of doing business and competition had a negative impact on the likelihood to choose a location. In addition, government support, coethnic social capital and non-coethnic social capital positively influenced the likelihood to choose a location. Furthermore, human capital partially moderated the relationship between coethnic social capital and likelihood to choose a location. Findings of this dissertation are applicable to start-up location decisions of other minority entrepreneurs in developed countries that have historically been restricted to certain areas and are increasingly on track to locate in new destinations. Furthermore, findings of this research can be applied to transnational entrepreneurs' start-up location decisions.

Table of Contents

List of Tables

List of Figures

Chapter 1

Introduction

Immigrant entrepreneurs play a significant role in economic development through generating new jobs, contributing to innovation, and creating demand for new products and services (Terjesen & Elam, 2009). Because of their importance to economic development, cities such as Detroit, Cleveland, Dayton, and Nashville and states such as Tennessee are currently and actively recruiting immigrant entrepreneurs ("Rolling out the Welcome", 2015). Highly-educated immigrant entrepreneurs are individuals with at least a bachelor's degree who voluntarily immigrate to the host country and create a business (Kaushal & Fix, 2006; Chaganti, Watts, Chaganti, & Zimmerman-Treichel, 2008). Nowadays, they are even in greater demand because of the growth potential of the businesses they create (Degraff, 2015). Yet, what do we know about how immigrant entrepreneurs, specifically highly-educated immigrant entrepreneurs, decide to locate their businesses? Despite the importance of this question, there has been limited investigation about it. In my dissertation, I examined this question and clarified the factors that highly-educated immigrant entrepreneurs consider in making start-up location decisions.

Historically, it has been assumed that immigrants face employment barriers in the mainstream economy; hence, they opt for self-employment in low-income industries, such as retailing and personal services. This has been challenged by new evidence showing that highly-educated individuals from developing nations are increasingly moving to developed countries to establish businesses in high-technology and professional services industries not only in their co-ethnic enclaves (i.e., clusters of immigrants of the same ethnicity) (Carnabuci & Wezel, 2011; Peterson & Roquebert, 1993), but also at non-enclave locations (Chrysostome & Lin, 2010; Fong, Chen, & Luk, 2008; Saxenian, 2002).

To address these challenges, I begin my dissertation by reviewing ethnic enclave theory (i.e., immigrants physically co-locate with those with similar ethnicity in the host country) and heterolocalism theory (i.e., immigrants retain ties to others of their ethnicity, but do not physically co-locate with them). Yet, these theories provide limited insight about location-specific attributes that highly-educated immigrant entrepreneurs consider in making location decisions. Furthermore, I consider location theory that suggests that location decisions of manufacturing firms are determined by costs (e.g., transportation costs, tax rates, etc.) vs. profits of locating at a location (Bull & Winter, 1991). By bringing these three theories together, I will provide a holistic and integrated framework for understanding highly-educated immigrant entrepreneurs' location decisions. I used conjoint analysis to empirically examine which factors, derived from each theory, were salient for highly-educated immigrant entrepreneurs' location decisions.

In this chapter, I introduce and justify my research question and objectives. I begin by identifying existing limitations and gaps in immigrant entrepreneurs' location decision research. Further, I discuss how I integrated ethnic enclave theory, heterolocalism theory, and location theory to predict highly-educated aspiring immigrant entrepreneurs' start-up location decisions. In so doing, I discuss factors that impact highly-educated immigrant entrepreneurs' location decisions and my dissertation's research method, conjoint analysis. Finally, I identify how my research contributed to existing theory and also its practical implications for highly-educated immigrant entrepreneurs and policy makers.

Research Question and Research Objectives

Research question

What are the factors that highly-educated immigrant entrepreneurs take into account when they make start-up location decisions in the host country? To answer this question, this dissertation focuses on the factors that impact highly-educated immigrant entrepreneurs' start-up location decisions. In so doing, my research synthesizes and integrates three theories, ethnic enclave theory (Waldinger, 1993), heterolocalism theory (Zelinsky & Lee, 1998), and location theory (North, 1955) and their competing predictions about immigrant entrepreneurs' start-up location decisions. According to ethnic enclave theory, aspiring immigrant entrepreneurs choose to locate with their ethnic enclaves, geographic clusters composed of immigrants who come from the same country (Portes, 1987). The reason for this, according to the theory, is that immigrants' coethnic social capital within the ethnic enclave eases their access to needed resources. These resources include ethnic financial resources, ethnic labor, support provided by coethnic friends and acquaintances, etc. (Kulchina, 2015; Ndofor & Priem, 2011).

Heterolocalism theory suggests that immigrant entrepreneurs do not necessarily locate their start-ups within coethnic enclaves but that instead their location patterns can be quite dispersed. This prediction is consistent with emerging evidence on recent immigrant entrepreneurs' location patterns (Zhou, 1998). Each of these theories recognize immigrant entrepreneurs' reliance on coethnic social capital, but ethnic enclave theory argues that for immigrant entrepreneurs to benefit from coethnic social capital, they have to physically locate within the ethnic enclave whereas according to heterolocalism theory, immigrants can set up their new ventures away from the ethnic community, yet maintain their bonds with their coethnic social capital. Furthermore, in this dissertation, I draw on location theory (North, 1955) to argue

that in addition to immigrant entrepreneurs' social capital, which have been the focus of ethnic enclave theory and heterolocalism theory, immigrant entrepreneurs are also likely to take into account other (location-driven) factors that directly or indirectly impact potential profitability of their start-ups, such as location-specific costs of doing business, intensity of competition, and government support.

Research objectives

I aim to achieve the following objectives with my research:

- To provide a better understanding of the factors that highly-educated immigrant entrepreneurs consider in making start-up location decisions;
- To synthesize and integrate theories with competing predictions about immigrant entrepreneurs' start-up location decisions, namely ethnic enclave theory and heterolocalism theory and to reconcile them with location theory to draw a more comprehensive picture of immigrant entrepreneurs' location decisions;
- To understand the role of both individual-relevant and location-relevant factors in shaping immigrant entrepreneurs' location decisions.

Motivation: Understanding Immigrant Entrepreneurs' Location Decisions

Challenge: Competing theories' predictions

Past research on immigrant entrepreneurs' location decisions is thin. The majority of immigrant entrepreneurship research identifies location patterns of these businesses using ethnic enclave theory. Ethnic enclave theory has its origins in sociology and was developed to predict immigrants' socio-spatial behaviors (e.g., location decisions, etc.) (Wilson & Portes, 1980; Portes, 1981); however, it moved beyond explaining immigrants' residential patterns in the host country to address immigrant entrepreneurs' economic activities (Portes & Jensen, 1989). Ethnic

enclave theory has been the theoretical framework in research on newly-arrived immigrants' labor market experiences (Wilson & Portes, 1980), the individual-centric factors (e.g., past entrepreneurial experience, access to resources, etc.) and location-centric variables (e.g., history, size, and ethnic enclave's structure) that are conducive to immigrants' engagement in entrepreneurial careers (Brenner, Menzies, Dionne, & Filion, 2010; Portes, 1987). It has also addressed research on immigrant-owned businesses' survival and success patterns (Bates, 1994), and business strategies pursued by immigrant-owned businesses (Ndofor & Priem, 2011), to name a few.

Ethnic enclave theory predicts that newly-arrived immigrants are likely to live and work in ethnic enclaves. According to this theory, immigrants are hired by other immigrant entrepreneurs within the enclave or establish their own start-ups and in turn recruit other coethnic immigrants. Benefits that accrue to immigrant entrepreneurs within ethnic enclaves include access to immigrant labor, ethnic supply chain, and ethnic financial capital which are facilitated by immigrant entrepreneurs' ethnic social capital within the enclave (Kulchina, 2015; Ndofor & Priem, 2011).

Heterolocalism theory has recently emerged in economic geography to explain immigrants' location decisions. According to heterolocalism theory, immigrant(s) [and by corollary, immigrant entrepreneurs] still maintain bonds with their coethnic SC (e.g., co-ethnic friends and acquaintances), but advent of technology (e.g., virtual communication means and fast and low-cost transportation means) has enabled them to locate in dispersed locations. Therefore, both of these theories – ethnic enclave and heterolocalism – support the idea of immigrants' reliance on their coethnic social capital, but ethnic enclave theory assumes that physical propinquity is a necessary condition to benefit from coethnic social capital whereas

heterolocalism theory does not consider physical location as a necessary requirement for benefiting from coethnic social capital in achieving business goals (Bushi, 2014).

Both ethnic enclave theory and heterolocalism theory recognize and give considerable credit to immigrants' coethnic social capital which is considered critical for immigrant entrepreneurs' business success. However, these theories ignore ties that recent immigrants, specifically highly-educated immigrants, may develop beyond their ethnic enclave. The non-coethnic social capital (i.e., heterophilous ties with individuals who do not share the same ethnicity with the immigrant (Prashantham, Dhanaraj, & Kumar, 2015)) might be substantial for a person who goes to school in the host country before founding a business. Whereas coethnic social capital eases immigrants' access to ethnic resources, non-coethnic social capital, which is mostly neglected in immigrant entrepreneurship research, provides immigrant entrepreneurs with access to other types of needed resources. For instance, coethnic social capital may link immigrant entrepreneurs to ethnic credit rotating associations whereas non-coethnic social capital may benefit immigrant entrepreneurs through offering advice and informational support. Taken together, these theories provide competing and contradictory predictions about highly-educated aspiring immigrant entrepreneurs' start-up location decisions.

Gaps and limitations: The singular focus on social capital

Although immigrants' location patterns have been studied in other disciplines including sociology (Jaeger, 2000; Bartel, 1989), there is lack of understanding about highly-educated immigrant entrepreneurs' location decisions. It is unknown how closely theory and findings related to immigrants' location decision are affected by the broader array of factors related to business start-up (e.g., securing resources, finding a profitable market niche, etc.). Therefore,

addressing other factors that influence highly-educated immigrant entrepreneurs' location decisions is needed.

Ethnic enclave theory and heterolocalism theory both emphasize the role of social capital, specifically coethnic social capital, in explaining immigrant entrepreneurs' socio-spatial behaviors. However, social capital is not the only factor that explains highly-educated immigrant entrepreneurs' location decisions. If predictions of ethnic enclave theory were comprehensive, all immigrant entrepreneurs would locate within ethnic enclaves. However, recent evidence consistent with heterolocalism theory indicates that immigrant entrepreneurs are increasingly moving to new destinations, away from their ethnic enclaves (Zhou, 1998).

Taking this into consideration, relying solely on social capital justifications does not give us a comprehensive understanding of highly-educated immigrant entrepreneurs' location decisions because other factors may also impact those decisions. For instance, factors articulated by location theory (Friedman, Gerlowski, & Silberman, 1992) such as costs of doing business (Blair & Premus, 1987), competition intensity (Chen & Moore, 2010), and government support (Dunning, 1998) are likely to explain highly-educated immigrant entrepreneurs' location decisions beyond that of social capital.

Although it is possible to extend ethnic enclave theory and heterolocalism theory's applications from immigrants' location decisions to those of immigrant entrepreneurs, this has not yet been theoretically developed or empirically examined. Moreover, highly-educated immigrant entrepreneurs are likely to be less embedded at any specific location and more mobile across places at the host country (Kaushal & Fix, 2006). In other words, highly-educated immigrants may consider themselves as global citizens, willing to move to places where the returns on their investments on human capital lead to higher pay-off. Thus, moving beyond

social capital justifications hold great promise for understanding highly-educated immigrant entrepreneurs' start-up location decisions.

Synthesis, integration, and reconciliation: In search of comprehensive explanations

As mentioned above, past research lacks comprehensiveness in predicting immigrant entrepreneurs' location decisions. One way to expand current understanding of immigrant entrepreneurs' location decisions is to tap into a broader set of factors that influences highly-educated immigrant entrepreneurs' location decisions. I argue that immigrant entrepreneurs' decisions are influenced not only by their social capital, but also by their human capital and characteristics of each location. In other words, I suggest that immigrant entrepreneurs' human capital (e.g., education, past entrepreneurial, and paid work experiences) and reliance on their coethnic and non-coethnic social capital impacts their start-up location decisions. Furthermore, immigrant entrepreneurs' perception of market characteristics at any location (e.g., intensity of competition, etc.) is likely to influence their location decisions. Therefore, I suggest that in addition to using ethnic enclave theory and heterolocalism theory in explaining and predicting immigrant entrepreneurs' location decisions, it is necessary to consider other theoretical frameworks, such as location theory (North, 1955). In the following section, I discuss how I draw on various theories to complement our understanding of the factors that impact immigrant entrepreneurs' location decisions.

Research Agenda

Theoretical underpinnings

In this research, I bring location-centric variables including costs of doing business, competition intensity, and government support, drawn from location theory (North, 1955), as possible explanations for highly-educated immigrant entrepreneurs' start-up location decisions.

Also, I use ethnic enclave theory (Waldinger, 1993) and heterolocalism theory (Zelinsky & Lee, 1998) to delineate other variables that impact highly-educated immigrant entrepreneurs' location decisions. Therefore, I hypothesize that the more immigrant entrepreneurs rely on their non-coethnic social capital, the less they will rely on the support and resources that are promised by their coethnic social capital within their ethnic enclaves. In addition, I propose that the higher immigrant entrepreneurs' human capital, the less likely it is that they rely on their ethnic resources that may attract them to locate inside their co-ethnic enclave. Furthermore, I argue that immigrant entrepreneurs' identification with their ethnic community at the host country strengthens the relationship between reliance on their coethnic social capital and their location decision likelihood.

Methodological approach

In my dissertation, I used conjoint analysis, which is an experimental method to capture highly-educated immigrant entrepreneurs' "decision policies" or "theories in use" (Shepherd & Zacharakis, 2002). Conjoint analysis allowed me to uncover the factors that impact highly-educated immigrant entrepreneurs' location decisions (Aguinis & Bradley, 2014). In so doing, I asked research participants to make a series of judgments based on a set of attributes from which I investigated the underlying structure of their location decisions. My research sample included first-generation international graduate students at the University of Tennessee. This research sample fitted my aim of studying highly-educated immigrant entrepreneurs' real-time location decisions, minimizing retrospective and self-report biases that were likely to skew my findings, if I had targeted immigrant entrepreneurs who had already made their start-up location decision.

Implications and Contributions

Research implications

In my dissertation, I integrated ethnic enclave theory, heterolocalism theory, and location theory to predict highly-educated aspiring immigrant entrepreneurs' start-up location decisions. With respect to entrepreneurship research, I brought theories from other disciplines, including geography and sociology to contribute to our understanding of highly-educated immigrant entrepreneurs' socio-spatial behaviors. According to Sequeira and Rasheed (2006), research on immigrant entrepreneurs have been limited so far, mainly due to lack of convincing theoretical frameworks that effectively explain and predict immigrant entrepreneurs' behaviors. One way to overcome this limitation is through bringing theories from other disciplines to the field of entrepreneurship and strategic management enhance our knowledge of various phenomena of interest (Herron, Sapienza, & Smith-Cook, 1991).

Past research shows that a business's location affects their performance outcomes (Hoogstra & Van Dijk, 2004; Pioch & Byrom, 2004). Although past research on location decisions of manufacturing companies, multi-national companies (MNCs) and geographic clusters is informative, we are not well-informed about location decisions of other types of companies, specifically entrepreneurial start-ups. Our knowledge gets even more blurred knowing that immigrant entrepreneurs face uncertainty and ambiguity due to their liability of newness. My research findings are generalizable beyond highly-educated immigrant entrepreneurs to inform location decisions of other types of entrepreneurs who face uncertainty in regards to the context where they are embedded.

Methodological contributions

My research on highly-educated aspiring immigrant entrepreneurs' location decisions provides two methodological contributions. First, it tests immigrant entrepreneurs' location decisions beyond ethnic enclave theory and heterolocalism theory to provide a broader model of immigrant entrepreneurs' location decisions. Second, it tests the hypotheses regarding immigrant entrepreneurs' real-time location decisions beyond survey and other post-hoc methods that do not fully reflect factors those individuals consider in making real-time decisions.

Practical implications

Below, I discuss my research implications for immigrant entrepreneurs and policy-makers.

Implications for immigrant entrepreneurs

My study extends our understanding of factors that impact highly-educated immigrant entrepreneurs' location decisions. Knowledge of these factors enables highly-educated aspiring immigrant entrepreneurs to make well-informed decisions about their start-up location.

Implications for policy-makers

Immigrant entrepreneurs play a significant role in the economic development of geographic regions through creating jobs and introducing new products, services, and processes (Saxenian, 2002). Hence, governments are willing to attract immigrant entrepreneurs to locations where progress in economic development is sought (Sequeira & Rasheed, 2006). If governments use the knowledge about factors that impact immigrant entrepreneurs' location decisions, they will be better able to make policies that encourage immigrant entrepreneurs to locate at target locations. My research findings also enable policy-makers better develop training and educational programs for aspiring immigrant entrepreneurs who are in the process of founding their business and making location decisions.

Organization of Dissertation

I have organized the remainder of the chapters as follows. In Chapter 2, after a brief discussion of the history of immigration to the U.S. and the immigration theories that focus on the transition of immigrants to the host country, I elaborate on various theories that predict immigrant entrepreneurs' location decisions and socio-spatial behaviors, including ethnic enclave theory, heterolocalism theory, and location theory. In Chapter 3, I draw on these three theories to develop a number of hypotheses related to highly-educated immigrant entrepreneurs' location decisions. In Chapter 4, I describe the research methodology that I used in my dissertation to test the hypotheses. In Chapter 5, I discuss my research findings and in Chapter 6, I explain how my research findings contribute to both theory and practice.

Chapter 2

Literature Review

Chapter Overview

Immigration drives economic development through the creation of new businesses. Historically, the U.S. has been the immigrants' destination from all over the world (Sequeira & Rasheed, 2006), and immigrants have played a key role in improving the quality of life in the U.S. For instance, successful companies such as Proctor & Gamble, Pfizer, and U.S. Steel, as well as eBay, Google and Brightstar have been established by immigrant entrepreneurs (Lezner, 2013). Immigrants are more than twice as likely to found businesses compared to their native counterparts, such that, 40 percent of Fortune 500 companies and 25 percent of other businesses in 2013, were founded by immigrants (Nasri, 2013). That said, there is evidence that only 5 percent of immigrant-owned businesses survive for more than three-and-a-half years, compared to 9 percent for other businesses (Clark, 2013). Given the importance of location decisions to businesses' success, it is likely to increase immigrant-owned survival rates by improving immigrant entrepreneurs' location decisions.

Location decisions are important not only for immigrant entrepreneurs, but for any entrepreneur because location impacts firm performance, for instance, through impacting its access to resources (Hoogstra & Van Dijk, 2004; Pioch & Byrom, 2004; Brush, Edelman, & Manolova, 2008). The start-up location decision is a crucial strategic decision that immigrant entrepreneurs make prior to founding their business. First-generation immigrants are likely to encounter ambiguity and uncertainty in making location decisions due to unfamiliarity with characteristics of various areas in the host country. This becomes even more challenging when the host country is large (e.g., the U.S.) and diverse in culture, religion, language, etc.

Past research on location decisions has taken two directions. It either takes into account the location decisions that are made based on objective cost-benefit considerations or those that are made based on subjective factors beyond explicit cost-benefit analysis. For instance, research on manufacturing plant location falls under the latter category. There is robust evidence that in manufacturing plant location choices, decision making takes a rational cost-benefit approach, considering the raw materials transportation costs and the shipping costs of final goods to target markets (Bull & Winter, 1991).

Research on multi-national corporations' (MNCs) location decisions has emphasized both explicit objective cost factors (e.g., wage rates, costs of acquiring resources, etc.) (Defever, 2006) and also subjective factors (e.g., host country's physical infrastructures' quality, cultural and institutional similarities and differences between the host and the home countries, quality of government support, the extent to which there is media coverage about the locations, etc.) (Friedman et al., 1992; Henisz & Delios, 2001; Flores & Aguilera, 2007; Lafuente, Vaillant, & Serarols, 2010; Kulchina, 2014).

There exists a thin body of research on the location decisions of entrepreneurial firms. Immigrants, compared to other groups of newly-arrived individuals to the host country (e.g., refugees, etc.), have more discretion to select where to reside, either on their own or with the help of their family and friends (Hardwick & Meacham, 2005). Compared to native-born entrepreneurs, immigrant entrepreneurs have higher mobility in the host country. This is probably because they are not yet as embedded in any parts of the host country, whereas native-born entrepreneurs usually establish their start-ups in their hometowns (Dahl & Sorenson, 2007). Similar to MNC location research, research on the entrepreneurial firms'

location incorporates both objective (e.g., tax & wage rates, etc.) and subjective factors (e.g., expectations regarding quality of life, etc.) (Love & Crompton, 1999; Lafuente et al., 2010).

The majority of research on immigrants' location decisions demonstrates that they are more inclined to locate with their coethnic enclaves which are defined as, "Socio-economic formation(s), characterized by spatial concentration of immigrant populations, the presence of immigrant capital, and vertical and horizontal integration among immigrant enterprises" (Pessar, 1995, p. 384). Ethnic enclaves provide immigrant entrepreneurs with access to various resources including emotional and financial support (Edin, Fredriksson, & Aslund, 2003, Kim & Hurh, 1985). On the other hand, the newly-emergent heterolocalism theory suggests that immigrants are likely to locate at dispersed locations, yet they maintain their coethnic social capital by reliance on communication and transportation means (Zelinsky & Lee, 1998).

Although the majority of research on immigrant entrepreneurs has been conducted from the lens of ethnic enclave theory, their location decisions are poorly understood. Therefore, in this research, I shed light onto factors that affect highly-educated immigrant entrepreneurs' location decisions. In the next section, I present a brief history of immigration to the U.S. Then, I discuss theories of immigration, including assimilation theory, dual labor market theory, middleman theory, and pluralism framework to set the stage for discussing the theories that are applicable to immigrant entrepreneurs' start-up location decisions, including location theory, ethnic enclave theory, and heterolocalism theory.

Brief History of Immigration to the U.S.

Major waves of immigrants entered the US at the beginning of the 19th century, particularly from the 1880s to 1920s. The majority of immigrants moved to the U.S. in search of better economic opportunities and religious freedom. The history of immigration to the U.S.

includes the era from the 17th to 19th centuries when Africans were forcibly moved to the U.S. to become slaves. Another important immigration-related date in U.S. history was when the 1882 Chinese Exclusion Act was enforced by Federal Law to prohibit the Chinese laborers' immigration to the U.S. Later, the Immigration Act of 1924 (Johnson-Reed Act) was enforced by Federal Law to limit the annual number of legal immigrants allowed to enter and reside in the U.S.

The U.S. Immigration and Nationality Act of 1965 is another critical point in the history of immigration to the U.S. Prior to that, the national quota system[1] was in favor of European nations; however, by enforcement of the Act of 1965, the national quota system changed such that it began to assign visas to candidates with families in the U.S. and those who possessed desirable professional skills. These changes attracted a large number of high-skilled professionals to the U.S. from all around the world ("U.S. Immigration before", 2009).

Although immigrants historically clustered in urban ethnic enclaves, not all professional immigrants follow the same pattern. In fact, many professional and highly-skilled immigrants disperse across the U.S. and locate in suburbs (Kimber, 2010). Another change in the settlement patterns of immigrants occurred in 1990s. Traditionally, newly-arrived immigrants resided at large cities, mostly on the East and West Coasts (e.g., New York, Miami, Los Angeles, Chicago, Seattle, etc.); however, an increasing number of second-generation immigrants started moving to inner-cities, including the South (McDaniel & Drever, 2009), which brought a growing number of immigrants' households and businesses to those areas (Fairchild, 2010). Following the brief introduction of immigration in the U.S. history, in the next section, I discuss the theories that

[1]-The national quota system was an American system of immigration quotas, between 1921 and 1965, which restricted immigration on the basis of existing proportions of the population. It aimed to maintain the existing ethnic composition of the U.S. (Office of the Historian, U.S. Department of State).

discuss location decisions, then I discuss immigrants' assimilation and insertion into the host country, followed by detailed discussion of immigration theories that form the cornerstone of this dissertation.

Literature Review on Location Decisions

Research on businesses' location decisions has been conducted through two dominant lenses. The first lens focuses on calculus and objective decisions that take into account explicitly-measurable location-specific costs including transportation and tax costs. The second lens views location decisions as a function of both the objective and subjective (i.e., less measureable) costs such as quality of physical infrastructures or cultural similarity between the home and the host country (Grégoire, Williams, & Oviatt, 2008). Whereas location theory is the dominant theoretical framework in manufacturing companies' location decisions research, the second stream focuses on MNCs and start-ups' location decisions and draws on various theories, including location theory. Recently, research on immigrant-owned businesses has attracted scholarly attention, partly because immigrants, specifically those that are highly-educated, exert influence on the wellbeing of the economies and host communities (Kerr & Kerr, 2014).

Research on immigrant entrepreneurs' location decisions has mostly focused on ethnic enclave theory to argue that immigrant entrepreneurs are more inclined to establish their new ventures within their coethnic enclaves because they provide immigrant entrepreneurs with access to ethnic resources (e.g., ethnic labor, ethnic financial capital, etc.) (Wilson & Portes, 1980; Portes & Jensen, 1989). Recently, a few researchers have used heterolocalism theory, arguing that immigrant entrepreneurs are also likely to locate their start-ups at non-enclave locations (Zelinsky & Lee, 1998).

In the following section, I provide a comprehensive review of past research on location decisions of entrepreneurial companies, including manufacturing companies, MNCs, companies locating at geographic clusters and immigrant-owned businesses.

Location decisions of entrepreneurial companies

Past research on location decisions of entrepreneurial firms has taken into account both location-specific explicit, objective and measurable costs associated with a location and also the location-specific subjective costs that do not lend themselves to objective measurement. For instance, findings of one study showed that energy costs (i.e., an objective cost) and available technical skills (i.e., a subjective factor) determined entrepreneurs' location decisions, specifically in manufacturing sectors (Carlton, 1983). Another study concluded that in addition to costs of raw materials and labor, other factors including quality of life at any location and entrepreneurs' personal preferences were influential in making location decisions (Blair & Premus, 1987). Further, Kolympiris and others (2014) identified that proximity to knowledge assets (e.g., medical schools, etc.) and venture capital firms affected academic entrepreneurs' location decisions. In other words, as academic entrepreneurs gained relevant experience, they established their start-ups away from their academic homes (Kolympiris, Kaloitzandonakes, & Miller, 2014). Furthermore, in making location decisions, entrepreneurs considered the timeliness of acquiring business licenses and availability of labor at any specific location (Kimelberg & Williams, 2013).

Overall, in research on start-ups' location decisions, the objective costs, suggested by location theory have been considered. It has also taken into account the subjective and hard-to-measure costs, including quality of life, weather conditions, etc. In the next section, manufacturing companies' location decisions that heavily rely on location theory are discussed.

Location decisions of manufacturing companies

Location theory, originated in economic geography, explains location patterns of manufacturing companies, emphasizing production costs minimization and/or profit maximization. This theory highlights the importance of factors such as access to raw materials, transportation costs, labor costs, and access to markets in achieving cost savings.

Consistent with location theory's predictions, cost minimization associated with land, labor and capital has been the addressed in businesses' location decisions (Friedman et al., 1992). Furthermore, tax rates negatively impacted location decisions of manufacturing companies (Charney, 1983). Blair and Premus (1987) characterized the best locations for manufacturing companies as those where the combined costs of transporting raw materials to the plant and transporting the output to the market is minimized.

In a survey of plant managers of Fortune 500 companies, plant location decisions were influenced by state-level characteristics, including costs of buildings and energy (Schmenner, Huber, & Cook, 1987). However, this research also included a limited number of subjective factors, such as the average level of a locale's education and weather conditions (Schmenner, et al., 1987) as important factors. In another study on location decisions of newly-founded plants owned by Fortune 500 companies, environmental regulations that impacted manufacturing companies' operations, also impacted their location decisions (Bartik, 1988).

By and large, location theory predicts factors that are considered in manufacturing company's location decisions. In the next section, I elaborate on location decisions of another type of companies, the MNCs.

Location decisions of MNCs

Research on MNCs' location decisions has mostly considered the subjective, implicit and hard-to-measure cost factors associated with business operations in different countries. The majority of this research has considered subjective cost factors including a host country's quality of infrastructures, political risks, and cultural and language similarities between the host and home countries. Past research on location decisions of MNCs sheds light onto immigrant entrepreneurs' location decisions because in both cases, the CEO/entrepreneur should handle medium to high levels of liability of newness. Past research shows that in making location decisions, MNCs were likely to consider their access to resources, their chances of new market entry or the extent to which they could be efficient choosing among location alternatives (Dunning, 1998). It was also likely that MNCs imitated other MNCs' location decisions (Henisz & Delios, 2001; Devereaux, Griffith, & Simpson, 2007).

Findings of a study on the first-time internationalization of U.S. companies revealed that executives take into account language similarities between the host and the home countries in making location decisions. In addition, they considered the extent to which they could use similar business models across countries (Williams & Grégoire, 2015). In another study on internationalization of U.S. companies, market characteristics and opportunity features dominated the thinking process of decision makers. Influential market characteristics included a host country's intellectual property rights, language, culture, trade barriers, and regulatory environment (Grégoire et al., 2008). In another study on MNCs' location decisions, findings indicated that market size, wage rates, transportation infrastructures, and state promotional activities attracted foreign investments (Friedman et al., 1992). There is evidence that for MNCs, proximity to intellectual and location-specific assets are also important. Based on

findings from one research study, MNCs located where they could exploit intellectual assets and favorable government incentives (Dunning, 1998). Kravis and Lipsey (1982) identified that proximity to large markets impacted location decisions of MNCs, but labor costs were also taken into account.

In another study on foreign location choices of the largest MNCs across Fortune 500 companies, a host country's GDP, population, physical infrastructures quality, and political, legal and institutional environments were positively associated with MNCs' investment likelihood in those locations. In another study on 11,000 location choices of MNCs in European countries, unit wage costs were identified to negatively influence location choices of MNC plants; however, these relationships were moderated by the type of the activity that the MNCs pursued. For instance, for upstream activities (e.g., R&D units, headquarters, etc.), location decision was influenced by the quality of legal systems whereas the average education level at that location was not found to be influential. However, for downstream activities (e.g., services, etc.), the average education level at that location exerted influence on location decisions (Defever, 2006).

In the following section, I discuss the location decisions of industrial clusters.

Industrial clusters/agglomeration

Weber (1909) is among the pioneer researchers in the study of organizations' and industrial clusters' location patterns. Industrial clusters are locations where businesses operating in similar and related industries cluster to share their resources, knowledge, and innovation (Bergman & Feser, 1999). Later, Marshall (1925) developed an explanation for why firms cluster: locating in clusters provides entrepreneurs with access to specialized labor, industry-specific resources, and effective flow of information and ideas. The term "external economies"

refers to benefits that companies gain (e.g., knowledge sharing, access to specialized labor and other resources, etc.) because of membership in clusters (Rosenthal & Strange, 2001).

In a study on Great Britain's disadvantaged areas, businesses chose to locate within geographic clusters, even if limited government support were provided to them, compared to non-cluster locations (Devereaux et al., 2007). Firms that located in clusters absorbed more knowledge from the environment and had higher growth and innovation performance (Gilbert, McDougall, & Audretsch, 2008). Although locating within ethnic enclaves was shown to influence firm performance through synergistic joint actions among businesses (Rauch, Doom, & Hulsink, 2014), the positive impact was contingent on enclave size, such that when enclave was small, locating within it benefited the businesses; however, as cluster size increased, the positive impact on firm performance diminished (Folta, Cooper, & Baik, 2006).

Businesses located within clusters do not benefit equally. For instance, for leading companies in technology, human capital and supplier relationships, locating in geographic clusters was not beneficial and even hurt their performance due to knowledge spillovers risks (Shaver & Flyer, 2000). Also, findings of another study showed that the extent to which skilled labor and specialized suppliers existed within a cluster, members' failure likelihood diminished; however, this relationship was strengthened by members' resource endowments (Pe'er & Keil, 2013).

Michael Porter in his book, *The Competitive Advantage of Nations* (1990), discussed geographic clusters of successful industries at the international level. According to Porter, geographic concentration of firms in industries with international reputation—the competitive advantage of nations—has important implications for competition at the international level. Although Porter (1990) mainly focused on firms in the same industry that geographically

clustered in their country of origin to benefit from country-specific advantages, he did not discuss firms of the same origin that geographically clustered outside their country of origin. Although past research on industrial clusters have concentrated mainly on firms that clustered, it has not yet explored the reasons why other businesses locate in non-clustered areas. In other words, the study of inherent risks associated with locating within clusters is missing in agglomeration theory.

Overall, location theory's and agglomeration theory's insights shed light onto the knowledge about objective and subjective factors that influence businesses' location decisions/ All in all, in this stream of research, the benefits and not the risks of locating within clusters have been emphasized.

Decisions to locate within clusters with similar and related businesses has a parallel in the immigrant-owned location decision literature – specifically when it comes to decisions about locating within ethnic enclaves. Similar to geographic clusters research, the ethnic enclave research encourages immigrant entrepreneurs to locate their business within their coethnic enclaves, without much attention paid to risks and disadvantages of doing so that discourage many immigrant entrepreneurs from locating within ethnic enclaves. I discuss this in more detail in the following section where I present an overview of theories that underpin immigrants' incorporation into the mainstream society. I discuss assimilation theory, dual labor market theory, pluralism framework, middleman theory and finally ethnic enclave theory and heterolocalism theory, which are foundations of my dissertation.

Immigrant entrepreneurs' location decisions

Research on immigrants in general has mainly built on assimilation theory, theory of dual labor market and middleman theory. These theories use different lenses to explain immigrants' adoption of a host country's culture, language, etc.

Assimilation theory and dual labor market theory

According to assimilation theory, which originated in sociology, newly-arrived immigrants in the host country maintain and practice their native language, culture, and values; however, they gradually assimilate into the host country when they start to adopt the host country's language, culture and values (Wilson & Portes, 1980). Immigrants' assimilation occurs in different ways. For instance, through acculturation, they adopt a host country's language and culture, and through structural assimilation they develop primary relationships with a host country's natives. Through spatial assimilation, immigrants start to live and work where natives do (Massey & Mullan, 1984). The key assumption of assimilation theory is that acculturation results in immigrants' residential mobility and consequently leads to immigrants' complete assimilation (Zelinsky & Lee, 1998). In other words, immigrants start at the bottom of the host country's social and economic hierarchy and gradually move up (i.e., upward mobility) as they assimilate into the mainstream society (Wilson & Portes, 1980; Massey & Denton, 1985).

It is possible to integrate assimilation theory and immigrant entrepreneurs' location decisions through the concept of spatial assimilation. According to assimilation theory, immigrants' residential assimilation results in dissolution of ethnic enclaves (Alba & Nee, 1997; Kimber, 2010).

Although assimilation theory considered the host country as a melting pot where immigrants of various ethnicities assimilate; militant protests during the 1960s challenged

assimilation theory's thesis by attracting attention towards discrimination and barriers that prevented immigrants and other minorities from integrating into the mainstream economy. For instance, they referred to labor market discrimination towards immigrants that led them to be hired at low-paid, low-status, dead-end and unstable jobs in the periphery sectors[2] of the mainstream economy (i.e., dual labor market). In addition, assimilation theory could not provide convincing explanations about experiences of those immigrants who were inassimilable, mainly of non-white groups (Portes & Böröcz, 1989). Therefore, assimilation theory's inadequacies in explaining socio-spatial behaviors of different immigrant groups led to the emergence of the dual labor market theory.

According to the dual labor market theory, it is likely that jobs in any society fall into two categories: highly-paid jobs with above-average working conditions and decent opportunities for growth and promotion (referred to as primary jobs) and low-paid, dead-end positions with below-average working conditions (termed as secondary jobs.) The theory suggests that immigrants and other minorities have limited access to primary jobs in the mainstream society and are more likely to be hired at secondary jobs (Dickens & Lang, 1985). Contemporary to the emergence of assimilation theory and the theory of dual labor markets, the pluralism framework was introduced to give a more realistic explanation of immigrants' socio-spatial behaviors.

Pluralism framework

According to the pluralism framework, immigrants develop a mosaic of self-sustaining ethnic communities, each of which is part of the larger political, social, and economic arena in the mainstream society. Whereas assimilation theory is built on the metaphor of a melting pot in which various ethnic communities assimilate to develop a wholeness, pluralism utilizes the

[2]- These firms are constrained to the conditions of competition, must offer low wages, otherwise they are likely to be doomed to failure.

mosaic metaphor to refer to both the diversity and also, the segregation of ethnic populations as assemblage of ethnic enclaves that survive throughout time (Zelinsky & Lee, 1998).

By mid-century, various American minority groups initiated protests for the sake of claiming their minority identities in spite of various barriers they faced in entering the mainstream society. This plus ethnic revival of European-Americans in the late 1970s and extensive post-1965 influx of immigrants to the U.S. gave a new life to pluralism which has been also called “multiculturalism” (Zelinsky & Lee, 1998).

By and large, by the 1960s, pluralism failed to maintain its favorable position in the eyes of the mainstream society because it suggested that immigrants do not necessarily assimilate into the host country and this was contrary to common assumptions about immigrants’ behaviors in the host country. Although pluralism and its implications were not well-embraced, it paved the way for another theory, the theory of middleman minorities that provided an alternative explanation about immigrants’ career strategies by taking into account their likelihood of forming self-sustaining ethnic communities at the margins of the mainstream society.

Theory of middleman minorities

According to Bonacich (1973), middleman minorities act as intermediaries between producer and consumer, employer and employee, owner and renter, and elite and masses. The theory of middleman minorities argues that labor market discrimination against immigrants did not necessarily lead them to seek employment in secondary jobs; instead, they formed solidary communities, occupying an intermediate position between the elite and the masses. Middleman minorities usually emerged in industries such as trade and commerce that did not require locked-in capital and labor contracts. Furthermore, vertical integration was a common practice among them (e.g., a Jewish garment manufacturer sells to a Jewish wholesaler who sells to a Jewish

retailer.) Another hallmark of middleman minorities is their concentration and dominance in certain business lines. For instance, before the Second World War, Japanese immigrants in Seattle concentrated in small shop businesses.

Ethnic enclave theory is the extension of the theory of middleman minorities; however, its predictions about immigrants' career choices goes beyond the theory of middleman minorities that was only applicable to a few immigrant populations who occupied middleman positions in the mainstream economy. In other words, ethnic enclave theory emerged to provide explanations about immigrants' socio-spatial behaviors that neither was explained by assimilation theory, nor by dual labor market theory.

Ethnic enclave theory

Recognition of "unmeltable" ethnic groups by the pluralism framework that neither assimilated into the mainstream society, nor accepted to be completely excluded from the mainstream society, led the way for the introduction of ethnic enclave theory in the 1970s. The "unmeltable" ethnic groups became the essence of ethnic enclave theory research. Ethnic enclaves were immigrants' concentration at particular regions or cities with low tendency to assimilate into the mainstream society and heavy reliance on their native culture and language (Wilson & Portes, 1980). In other words, ethnic enclaves are clusters composed of coethnic immigrants with heterogeneous class resources (e.g., education, entrepreneurial background, etc.) who arrive in successive waves and intend to stay in the host country (Portes, 1987). Their viability depends on the historical circumstances and the resources they bring to the host country. Chinese, Jews, Cubans, and Koreans are among the ethnicities who have formed ethnic enclaves in the U.S. (Alvarez, 1990). Ethnic enclaves promote diversification by hosting heterogeneous immigrant-owned enterprises while encouraging horizontal and vertical integration across them

(Wilson & Portes, 1980). In the context of ethnic enclaves, immigrants' ethnicity is the most important reason why they have privileged access to ethnic resources (e.g., ethnic labor, ethnic financial capital, etc.).

One seminal piece which triggered much enthusiasm about ethnic enclaves was Wilson and Portes's (1980) work on the Cuban immigrant enclave in Miami. Through their longitudinal survey that captured newly-arrived Cuban refugees' labor-market experiences from 1973 to 1976, they found that a considerable number of new-comers was hired by coethnic employers and they had higher incomes, working in immigrant-owned businesses, compared to those refugees who were hired by white employers in secondary labor markets. Although Wilson and Portes (1980) referred to this phenomenon as the "ethnic enclave hypothesis," they were not the first scholars to introduce the concepts of an ethnic enclave. Earlier, other scholars had implicitly referred to what this theory explains; however, early discussions had framed immigrants' employment in immigrant-owned businesses as a sweatshop; however, Wilson and Portes (1980) shed new light onto ethnic enclave hypothesis by reframing immigrants' recruitment in immigrant-owned businesses as apprenticeship opportunities that prepared newly-arrived immigrants for possibly opening up their businesses in the future.

After Wilson and Portes (1980), Portes followed up this research with Jensen (1989) and further examined the ethnic enclave black box. In doing so, they tested four hypotheses in a sample of Cuban refugees, the Mariel Boatlift refugees, in which they made the following conclusions. First, Portes and Jensen (1989) distinguished between "living in the ethnic enclave" and "working in the ethnic enclave." They suggested that considering these two as one phenomenon was misleading in ethnic enclave research. Second, they suggested that establishing start-ups within ethnic enclaves had positive earning outcomes for immigrant entrepreneurs.

Third, they concluded that there was not a significant difference between earning outcomes of immigrants hired in immigrant-owned businesses and those hired outside ethnic enclaves. Fourth, they identified the reason why only some immigrants chose to establish start-ups within their coethnic enclaves. They argued that gender and marital status, rather immigrants' human capital were influential on immigrants' decision to pursue entrepreneurial careers (Portes & Jensen, 1989).

In another seminal piece that used ethnic enclave theory, Portes (1987) explicated Cuban immigrant' entrepreneurial paths. According to him, immigrants' likelihood of establishing businesses depended on their access to various types of capital and their business experience (Portes, 1987). In addition, immigrant-owned businesses' resource needs impacted whether they located within ethnic enclaves. In her research on Mexican immigrant entrepreneurs, Alvarez (1990) provided evidence that Mexican entrepreneurs relied on Mexican immigrants for both economic exchange and access to ethnic labor.

With respect to the consequences of locating within ethnic enclaves, past research shows that type and structure of available resources in the ethnic enclave and its dominant value system influenced the structure and other characteristics of immigrant-owned start-ups founded within the enclave (Chaganti & Greene, 2002). In addition, the ethnic enclave's history and structure influenced businesses' operation modes (Brenner et al., 2010).

Beyond the antecedents and outcomes of start-up location within ethnic enclaves, research on immigrant-owned businesses spans other areas such as marketing and business strategies that they pursue. For instance, businesses owned by Asian immigrants were more likely to fail if they only served a minority clientele (Bates, 1994). Also, immigrant entrepreneurs' economic and human capital and the extent to which they identified with their

ethnic community impact their marketing strategies. For example, immigrant-owned businesses that addressed the customer's needs in the mainstream economy were characterized with high human and financial capital endowments. On the other hand, those that targeted enclave markets were characterized as strongly identifying with their coethnic community. To their surprise, no significant relationship was found between immigrant entrepreneurs' financial capital and their business strategy (Ndofor & Priem, 2011). On the other hand, Bates (1994) showed that immigrant-owned businesses' longevity and profitability was determined by their human capital and financial investments, rather than by their social capital. This was not consistent with another research finding that showed that immigrant entrepreneurs' social capital (reinforced through proximity to successful coethnic immigrant entrepreneurs) positively impacted their access to needed resources (Kalnins & Chung, 2006).

In another study, it was shown that although the prerequisite conditions for ethnic enclave formation may exist, their formation is not guaranteed because other factors (e.g., diversity in immigrants' social class, race, national origins and time of arrival in the host country) may hamper emergence of solidary ethnic enclaves (Pessar, 1995). Therefore, the mere geographic concentration of a large number of immigrant-owned businesses does not necessarily imply ethnic enclave formation. Table 2.1 presents a summary of ethnic enclaves' seminal research, published in sociology, anthropology, and management outlets.

Insert Table 2.1. about here

Not all research on ethnic enclaves has focused on the benefits of locating within ethnic enclaves because advantages always come along with disadvantages. Past research shows that ethnic enclaves' social mechanisms and community solidarity are likely to constrain immigrants' freedom of action (Portes & Sensenbrenner, 1993).

Heterolocalism theory

Contrary to widely-held predictions of ethnic enclave theory in regards to immigrants' willingness to reside within ethnic enclaves, further evidence demonstrated that immigrants did not necessarily locate within the enclaves (McDaniel & Drever, 2009). Increased living costs in the downtown areas – which were historically home to ethnic enclaves – available employment opportunities in other locations, ease and cost-effectiveness of transportation and communication technologies, and a plethora of other economic and social factors encourage newly-arrived immigrants to choose non-enclave locations (Hardwick, 2006). Heterolocalism theory, introduced by the geographers Zelinsky and Lee (1998), argues that more recent immigrants are less willing to reside at ethnic enclaves, but they are likely to reside in dispersed locations, yet they maintain their ethnic ties with other coethnic immigrants via modern communication and transportation means. They maintain their ethnic ties and demonstrate their identification with their ethnic community by travelling from one community to another in order to access ethnic shops and restaurants, churches, and other social entities that tie them to their ethnic community (Hardwick & Meacham, 2005).

Zelinsky (2001) expanded heterolocalism theory in his seminal book, *The Enigma of Ethnicity: Another American Dilemma*, to better explain the relationship between spatial patterns and social networks that help immigrants to maintain their ethnic identities. In the first representation of heterolocalism theory, Zelinsky and Lee (1998) focused on a regional level of

analysis. In further considerations and in response to criticisms posed to heterolocalism theory, Zelinsky extended heterolocalism theory to apply to both metropolitan and non-metropolitan areas (Hardwick, 2006).

Heterolocalism theory challenges both assimilation theory and the pluralism framework and their over-emphasis on ethnic identity as a determinant of immigrants' settlement patterns. Consistent with heterolocalism theory, past research provides evidence that for Chinese-owned businesses in Toronto, location distribution was determined by the business size, rather than by ethnicity (Fong, Chen, & Luk, 2012).[3] It is worth noting that inclination towards heterolocalism varies across ethnicities. A study on refugee settlement patterns in the U.S. revealed that white Protestant minority groups tended to cluster in specific parts of the metropolitan regions. In contrast, the Vietnamese demonstrated more heterolocal orientations in their location decisions (Hardwick & Meacham, 2005). Compared to ethnic enclave theory, heterolocalism theory suggests that immigrants are likely to locate outside their ethnic enclaves; however, they are able to maintain their ethnic identity and their ethnic bonds with the help of technology.

Chapter Summary

In Chapter 2, I provided a comprehensive review of the literature relevant to highly-educated immigrant entrepreneurs' location decisions. Although this research is primarily using location theory, ethnic enclave theory, and heterolocalism theory, the prominent immigration theories (assimilation theory, theory of dual labor markets, pluralism framework, and the theory of middleman minorities) were also discussed in this chapter to set the stage for introduction of the three foundational theories in this dissertation. In Chapter 2, I discussed how location theory, ethnic enclave theory, and heterolocalism theory provide different perspectives in drawing a

[3]- In this study, the Chinese enclave was defined as Census tracts in Toronto with a majority of Chinese residents.

comprehensive picture of highly-educated immigrant entrepreneurs' location decisions. Whereas ethnic enclave theory emphasizes immigrant entrepreneurs' coethnic social capital as an influential factor in determining their location decisions, heterolocalism theory implies that immigrant entrepreneurs' non-coethnic social capital and their human capital are also likely to influence their location decisions. Along those same lines, location theory suggests that other factors (e.g., costs of doing business, competition, and government support) may also impact immigrant entrepreneurs' location decisions. I developed Chapter 2 with the aim of setting the stage for introducing my research hypotheses in Chapter 3. In Chapter 3, I develop my research hypotheses based on the theories that I discussed in Chapter 2.

Chapter 3

Hypotheses Development

Chapter Overview

In this chapter, I discuss the development of my dissertation's hypotheses about highly-educated immigrant entrepreneurs' location decisions. In other words, I propose a model predicting where highly-educated immigrant entrepreneurs are more likely to locate their start-up operations in the host country. In so doing, I draw on three main theories, namely location theory, ethnic enclave theory, and heterolocalism theory. I use location theory to argue that immigrant entrepreneurs' location decisions are impacted by location-specific costs of doing business, competition, and government support. I apply ethnic enclave and heterolocalism theories to argue that immigrant entrepreneurs locate where their resource needs are met; for instance, in locations where they have social capital. With respect to social capital, I extend prior research by distinguishing between and hypothesizing the effects of coethnic and non-coethnic social capital on highly-educated aspiring immigrant entrepreneurs' location decisions. Also, I discuss the interaction between immigrant entrepreneurs' coethnic social capital and their self-identification with their coethnic community, their human capital, and their reliance on ethnic financial capital. Table 3.1 summarizes the hypotheses and Figure 3.1 graphically demonstrates the proposed relationships. In Figure 3.1, I demonstrate the connections between my dissertation's model and location theory, ethnic enclave theory, and heterolocalism theory.

Insert Table 3.1. about here

Insert Figure 3.1. about here

Location-relevant factors and location decisions: Location theory

Location-specific costs of doing business

Location theory suggests that manufacturing companies locate where operation costs are minimized and earnings are maximized. One category of location theory, the hoteling location model (1929), considers companies' pricing behaviors as a function of their location. According to this model, firms compete and price their products, based not on differentiated features of their offerings but based on their geographic location. In this model, location-specific costs (e.g., transportation costs) are a function of the distance between the manufacturing plant and target markets and also the distance between suppliers' location and manufacturing plants. Accordingly, as customers seek products at lower prices, manufacturing companies minimize their production costs to maintain their customers (Mai & Peng, 1999). Therefore, locate where objective costs of land, tax rates, wage rates, and costs of acquiring capital are minimized (Charney, 1983; Friedman et al., 1992).

Although location theory has been mainly applied to manufacturing plant research, it has recently been applied to other types of organizations, including MNCs. According to MNC research, operating a business across borders incurs costs associated with liability of foreignness[4], unfamiliarity hazards[5], and discrimination hazards[6] that do not incur to companies that operate in their homelands (Eden & Miller, 2001); this put MNCs at a disadvantaged position. Furthermore, location theory also addresses subjective costs, including the psychic costs (Williams & Grégoire, 2015), intellectual property rights, and trade barriers as factors that

[4]- Costs related to being a stranger in a new land
[5]- Lack of knowledge about the host country's markets
[6]- Discriminatory treatment inflicted on MNCs relative to national firms in the host country

determine location decisions (Grégoire et al., 2008). By and large, past research shows that companies consider the above-mentioned costs, also termed as market entry costs, when choosing among location alternatives (Chen & Moore, 2010).

Location theory can also be applied to immigrant entrepreneurs' location decisions. Immigrant entrepreneurs are likely to choose locations that require comparatively lower costs of doing business. This enables them to secure more capital for unexpected costs that may occur in the process of starting their business or afterwards. Starting businesses with lower expenses enables immigrant entrepreneurs to diminish their reliance on financial capital, acquired from external resources (e.g., ethnic financial resources, bank loans, etc.). Therefore, I hypothesize that,

H1. The likelihood to choose a location increases as location-specific costs of doing business decreases.

Location-specific competition

Attractiveness of a location for business purposes is determined by a number of factors, including intensity of rivalry among similar companies. In other words, at locations where competition among rivals is intense, entry barriers are higher; hence, entrepreneurs are less likely to target those market because the more market share competitors obtain, the less is available to others (Esses, Dovidio, Jackson, & Armstrong, 2001). In the case of immigrant entrepreneurs, if liabilities of foreignness, unfamiliarity with the host country and discrimination hazards are taken into account, location decisions become even more challenging. It is also likely that competition drives prices and profit margins down and makes highly competitive markets less attractive to potential entrants (Hitt, Ireland, & Hoskisson, 2010).

With respect to immigrant entrepreneurs' location decisions, there is a large body of research in support of immigrant entrepreneurs' willingness to locate within ethnic enclaves; however, there is also evidence that serving merely coethnic clients within the enclave increases the odds of business failure (Bates, 1994). As more immigrant-owned businesses exclusively focus on limited ethnic market niches, competition becomes more intense among them (Pe'er & Keil, 2013). Hence I hypothesize that,

H2. The likelihood to choose a location increases as location-specific competition decreases.

Government support

According to Porter (1990), governments have a great stake in where immigrant-owned businesses locate because they impact regional economic development. At the same time, immigrant entrepreneurs consider political and social environmental quality in their location decision processes (Marger, 2001). Therefore, governments are accountable to support the prosperity and growth of these businesses. Along those same lines, government interventions to improve business environments range from minimalist actions (e.g., enforcement of temporary tax exemptions for immigrant-owned businesses, etc.) to activist roles (e.g., ensuring vigorous competition, etc.) (Porter, 1998). Past research indicates that government support initiatives, such as tax exemptions and initial credit supports, impact start-ups' long-run growth (Hansen, Rand, & Tarp, 2009). In addition, incentives such as opportunities offered to struggling entrepreneurs by location-specific incubators (e.g., access to market and industry knowledge, etc.) are likely to persuade them to locate where those opportunities exist (Watson, Hogarth-Scott, & Wilson, 1998). For instance, location-specific government support provided to Cuban businesses in the U.S. has played an important role in the development of the Cuban enclave in Florida (Peterson & Roquebert, 1993).

That is why Chicago Community Ventures provides financial and consultation services to small businesses owned by women and minority entrepreneurs. In addition, the Small Business Supplier Diversity Program assigns part of state agencies' construction, housing rehabilitation and supply services contracts to certified small businesses with 25% of them being distributed among minority business enterprises ("What works for small businesses", 2008). In regards to the role of government support on promoting immigrants' entrepreneurial activities, I hypothesize that,

H3. The likelihood to select a location increases as location-specific government support increases.

Individual-relevant factors: Ethnic enclave theory and heterolocalism theory

Ethnic enclave theory and location decisions

Making location decisions requires that immigrant entrepreneurs evaluate the extent to which they will have access to needed resources at any location. Likewise, ethnic enclave theory argues that immigrants of the same ethnicity cluster in ethnic enclaves and this eases their access to a variety of resources, including ethnic financial capital (Sanders, 2002), ethnic labor (Waldinger, 1984; Alvarez, 1990), specialized knowledge (Hernandez, 2014), and access to business contacts (Ebaugh & Curry, 2000).

One way to ensure the access to resources is to develop relationships, social capital, with others who control the flow and distribution of resources (Pfeffer & Salancik, 2003). Social capital has been extensively applied to entrepreneurship research in explaining how entrepreneurs rely on their network of relationships to differentiate themselves from competitors (Barney, 1991; Crook, Todd, Combs, Woehr, & Ketchen, 2011). In my dissertation, I define social capital as "the sum of resources, actual or virtual that accrue to an individual or group by

virtue of possessing a durable network of more or less institutionalized relationships" (Burt, 2001, p. 32). Social capital helps businesses access needed resources, innovate and commercialize their innovations (Jones, Suoranta, & Rowley, 2013). Reliance on social capital for business success is not specific to indigenous entrepreneurs; it is also widely used by immigrant entrepreneurs.

Generally, individuals are more likely to interact and form bonds with those with whom they have commonalities in terms of gender, ethnicity, etc., termed as the homophily effect in sociology (Ibarra, 1992; McPherson, Smith-Lovin, & Cook, 2001). Therefore, immigrants are likely to rely on their shared ethnic background to develop strong and reliable bonds with immigrants of the same ethnicity, termed as coethnic social capital (Peterson & Roquebert, 1993). Past research demonstrates that if ethnic enclave's members face challenges in running their business (e.g., resource constraints, etc.), they are more willing to seek support from their coethnic social capital rather than others (Breton, 1964). In other words, immigrant entrepreneurs are likely to locate where they have coethnic social capital because it facilitates their access to various resources. Therefore, I hypothesize that,

H4a. The likelihood to select a location increases as the number of location-specific coethnic social capital increases.

Heterolocalism and location decisions

Immigrant entrepreneurs are assumed to be mostly embedded in their ethnic communities in the host country; however, this undermines immigrants' efforts in navigating the wider economic, social, and institutional context of the mainstream society (Kloosterman, Van der Leun, & Rath, 1999). Throughout time, immigrants gradually expand their social capital beyond their coethnic community by developing non-coethnic social capital (Zarrugh, 2007). By non-

coethnic social capital, I refer to heterophilous relationships that immigrants develop with individuals from other ethnicities or countries of origin (Prashantham et al., 2015). Development of non-coethnic social capital mostly applies to highly-educated aspiring immigrant entrepreneurs, many of whom pursue a university degree in the host country prior to starting their business (Wadhwa, Rissing, Saxenian, & Gereffi, 2007). Going to school in the host country is one way they develop relationships with others beyond their ethnic communities. In addition, highly-educated immigrants attend academic and practitioner conferences that give them ample opportunity to develop their network. Distinguishing between immigrant entrepreneurs' coethnic and non-coethnic social capital is essential because immigrant entrepreneurs treat them differently and also reap different benefits from them (Saxenian, 2002). For instance, immigrant entrepreneurs are likely to associate more trustworthiness to their coethnic relationships and heavily rely on them at the time of hardships. On the other hand, they may refer to their native-born friends and acquaintances (i.e., non-ethnic social capital) when they seek information about the host country's business environment (Prashantham et al., 2015). Therefore, I predict that,

H4b. The likelihood to select a location increases as the number of location-specific non-coethnic social capital increases.

Past research demonstrates that in the course of assimilation, immigrants reconstruct their social capital in the host country. Immigrants form their social capital partly in response to their needs (Breton, 1964). I argue that highly-educated immigrant entrepreneurs' needs are met to a large extent by non-coethnic ties because a considerable number of these immigrants pursue some part of their education in the host country's universities which gives them a considerable opportunity to develop relationships with non-coethnic individuals. This increases their chances

of being introduced to an extensive pool of opportunities beyond their coethnic enclave. For instance, past research findings show that as the frequency of immigrant entrepreneurs' contact with non-coethnic social capital increases, they become less likely to engage in their ethnic enclave (Zhou, 1998; Ndofor & Priem, 2011).

When immigrant entrepreneurs possess both coethnic and non-coethnic social capital, they are likely to rely less on their coethnic social capital as long as their needs are met by their non-coethnic social capital. In other words, immigrants are likely to substitute their coethnic social capital with their non-coethnic social capital as long as their needs are largely met by their non-coethnic social capital. Therefore,

H5. Non-coethnic social capital moderates the relationship between location-specific coethnic social capital and location decision likelihood such that the positive relationship becomes less positive as non-coethnic social capital increases.

Social identification with ethnic community

According to cognitive categorization theories, individuals are sub-consciously inclined towards categorizing themselves, as well as others, into social groups based on race, gender, and age (Fiske, 1998). Social identity theory (Tajfel, 1979) takes a step further to suggest that individuals' tendency to socially identify with existing groups is key to their self-esteem. Although individuals can identify with multiple groups at any point in time, they identify with the groups with which they share more salient features in the social context where they are embedded (Sears, Fu, Henry, & Bui, 2003).

Self-identification with the ethnic community occurs when immigrants perceive a sense of belonging to the community or to the culture from which they come (Phinney, Horenczyk, Liebkind, & Vedder, 2001). Ethnic identity has two components: one involves developmental

processes through which immigrants explore their ethnic identity. The second aspect refers to an immigrant's decision to become a member of their ethnic community. Immigrants who choose to become part of their ethnic community in the host country adopt norms, values and attitudes associated with that group (Phinney, Romero, Nava, & Huang, 2001). In addition, they are more likely to live and work within the ethnic enclave, have more interactions with their coethnic social capital, and speak their native language (Sears et al., 2003). Membership in the ethnic community helps newly-arrived immigrants to better navigate the host country's new context, filled with ambiguity (Carnabuci & Wezel, 2011).

Although in both ethnic enclave and heterolocalism theories immigrants' identification with their ethnic community is a central theme, they offer different insights about it. On one hand, ethnic enclave theory implies that immigrants who strongly identify with their ethnic community are more likely to locate with the ethnic enclave (Portes, 1987). On the other hand, heterolocalism theory suggests that locating with the ethnic enclave does not entirely predict immigrants' identification with their ethnic community. Heterolocalism further explains that easy and cost-effective communication and transportation means enable immigrants to live away from each other, yet maintain their ethnic bonds (Zelinsky & Lee, 1998).

I build on the above discussions to argue that immigrant entrepreneurs, highly invested in their ethnic community, are more likely to rely on their coethnic social capital. In other words, the more immigrant entrepreneurs identify with their ethnic community in the host country, the more they rely on their coethnic social capital to ease their access to needed resources. Therefore,

H6. Social identification with the coethnic community in the host country moderates the relationship between location-specific coethnic social capital and the likelihood to choose a

location, such that the positive relationship becomes more positive as social identification with the coethnic community increases.

Immigrant entrepreneurs' human capital

Heterolocalism theory predicts that recent waves of immigrants do not necessarily locate within ethnic enclaves. One possible reason is that compared to past immigrants, recent immigrants with higher human capital rely less on their social capital for support. Taking into account the high education credentials of recent immigrants, a possible explanation for this phenomenon is that they are able to rely on their human capital as a potential substitute for their social capital. In this dissertation, I refer to human capital as costs versus returns on investing in tacit and explicit knowledge and skills. Past research findings show that reliance on coethnic social capital was stronger among non-professional (e.g., low in human capital) immigrant entrepreneurs (Sanders, 2002). In addition, past studies showed that success of immigrant-owned businesses was associated with immigrant entrepreneurs' human capital such that the low-success businesses relied heavily on their social capital whereas in more prosperous firms, immigrant entrepreneurs relied on their human capital (Bates, 1994). Furthermore, immigrant entrepreneurs with past entrepreneurial experience were less reliant on their coethnic social capital upon entry to the host country (Marger, 2010).

Therefore, I argue that the relationship between immigrant entrepreneurs' coethnic social capital and their location decisions is moderated by their human capital. That said, immigrant entrepreneurs with high human capital are less likely to rely on their coethnic social capital. This is because highly-educated immigrant entrepreneurs are more likely to use their human capital as a substitute for their co-ethnic social capital in gaining support and access to resources.

I use Resource Dependence Theory's (RDT's) logic as a foundation for my argument. RDT predicts that organization's survival depends on reducing its dependence on uncertain flow and distribution of scarce resources in organization's environment. One way to do so is to substitute uncertain resources with other ones over which the organization can exert more control (Pfeffer & Salancik, 2003). It is possible that immigrant entrepreneurs substitute their social capital with their human capital because human capital is more readily under immigrant entrepreneurs' control, compared to social capital that depends on others' collaboration with the immigrant entrepreneur. Immigrant entrepreneurs can spend extensive effort on their own to develop their human capital; however, they need other individuals' consent and collaboration to develop relationships with them.

Therefore, I hypothesize that,

H7. Human capital moderates the relationship between location-specific coethnic social capital and the likelihood to choose a location, such that the positive relationship becomes less positive as immigrant entrepreneurs' human capital increases.

Furthermore, because immigrants benefit differently from their coethnic and non-coethnic social capital, I distinguish between immigrant entrepreneurs' human capital interaction with their coethnic vs. non-coethnic social capital. Another reason for distinguishing between these interactions effects is that past research has mainly focused on immigrant entrepreneurs' coethnic ties, leaving the scholarly understanding of immigrant entrepreneurs' non-coethnic ties and their boundary conditions undeveloped. Similar to my reasoning for hypothesis 7, I predict that highly-educated immigrant entrepreneurs are likely to substitute their human capital with their non-coethnic social capital when choosing among location alternatives.

Therefore, I hypothesize that,

H8. Human capital moderates the relationship between location-specific non-coethnic social capital and the likelihood to choose a location, such that the positive relationship becomes less positive as immigrant entrepreneurs' human capital increases.

Immigrant entrepreneurs' financial capital

Immigrant entrepreneurs' access to financial capital plays a critical role in their business survival and success (Bates, 1994; Ndofor & Priem, 2011; Kolympiris et al., 2014). This is not surprising as financial capital is vital for any businesses' vitality. Immigrant entrepreneurs' financial resources can be quite different than that of native-born entrepreneurs. Immigrant entrepreneurs' financial resources include entrepreneurs' personal savings, their family wealth, money borrowed from their coethnic and non-coethnic social capital, bank loans, money borrowed from ethnic credit rotating associations, etc. (Sanders & Nee, 1996).

Extending prior work on ethnic enclave theory, I utilize RDT to argue why the relationship between immigrant entrepreneurs' coethnic social capital and the likelihood to choose a location is moderated by their reliance on ethnic financial capital. According to RDT, organizations are constantly seeking resources that are at the hands of other actors in the organization environment (Pfeffer & Salancik, 2003). One way to manage these dependencies is to gain proximity to those who control the flow and distribution of resources. In the case of immigrant entrepreneurs, it is likely that their physical proximity to their coethnic social capital improves the quality of immigrant entrepreneurs' relationships with their friends and acquaintances; hence, this eases immigrant entrepreneurs' access to the resources they obtain through their coethnic social capital. One such resource is ethnic financial capital. Immigrant entrepreneurs rely on their coethnic social capital for access to ethnic financial capital, such as money borrowed from coethnic friends or low-interest loans from ethnic credit rotating

associations. I argue that immigrants' reliance on ethnic financial capital increases the likelihood that they locate where their coethnic social capital is. Therefore,

H9. Reliance on ethnic financial capital moderates the relationship between coethnic social capital and the likelihood to choose a location, such that the positive relationship becomes more positive when immigrant entrepreneurs' reliance on ethnic financial capital increases.

Chapter Summary

In Chapter 3, I discussed my dissertation's hypotheses about highly-educated aspiring immigrant entrepreneurs' start-up location decisions in the host country. In developing the hypotheses, I integrated predictions of ethnic enclave theory and heterolocalism theory that offer contradicting insights about immigrant entrepreneurs' location decisions. I also used location theory to provide a better understanding of the factors that highly-educated immigrant entrepreneurs consider when making location decisions. By and large, I argue that highly-educated aspiring immigrant entrepreneurs' location decisions are impacted by location-specific costs of doing business, competition, and government support. Furthermore, immigrant entrepreneurs' coethnic and non-coethnic social capital influence immigrant entrepreneurs' likelihood to choose a location. In addition to main effects, I provided predictions about the moderating effects of immigrant entrepreneurs' reliance on non-coethnic social capital, their identification with their ethnic community, and their reliance on ethnic financial capital on their coethnic social capital. I also hypothesized the moderating effects of immigrant entrepreneurs' human capital on both their coethnic and non-coethnic social capital.

Chapter 4

Research Design and Methods

Chapter Overview

In my dissertation, I utilized conjoint analysis to test the hypotheses, addressing aspiring highly-educated immigrant entrepreneurs' start-up location decisions in the host country. In Chapter 4, I discuss how the use of conjoint analysis helped me to capture the decision rules that aspiring highly-educated immigrant entrepreneurs use in making start-up location decisions. In addition, I elaborate on my research materials that included an online conjoint experiment and a post-experiment questionnaire. Further, I talk about my research sample that included first-generation international graduate students with future entrepreneurial intentions at the University of Tennessee. In reviewing my sampling procedures, I also discuss the validity and reliability checks that I conducted to ensure robustness of my findings. Then, I elaborate on how I collected data via the Qualtrics online platform. Finally, I discuss the data analysis and operationalization of the study variables.

Conjoint Analysis

In my dissertation, I used conjoint analysis with an orthogonal fractional factorial design (Haynie, Shepherd, & McMullen, 2009) to examine the location attributes that highly-educated first-generation aspiring immigrant entrepreneurs consider when choosing where to locate their business operations in the host country. To accomplish this, I provided the research sample with location profiles that involved various theoretically-driven attributes (variables) that prior research suggested to be considered by entrepreneurs, multi-national companies (MNCs), manufacturing companies, and immigrants in general when making location decisions. Then, I

asked participants to rate their preference in regards to each location profile at different levels of attributes.

Following what is common in conjoint analysis in entrepreneurship research (Wood, McKelvie, & Haynie, 2014; Wood & Williams, 2014), participants were provided with a series of instructions about the set-up of the location decision-making exercise (Green, Krieger, & Wind, 2001). Then, participants briefly read attribute descriptions in order to make sure they understood what different attributes at varying levels implied. Then, profile descriptions in which attributes were manipulated at different levels (e.g., high vs. low) were presented to participants, and they were asked to determine the extent to which they were likely to choose each of the location profiles. Consistent with a fractional factorial design in conjoint analysis, each participant evaluated 21 location profiles. The experiment was followed by a post-experiment questionnaire in which participants were asked to self-report on variables that conceptually and theoretically did not lend themselves to manipulation (Haynie et al., 2009); however, influenced immigrant entrepreneurs' location decisions. Following standard practices for conjoint analysis and nested data, I used hierarchical linear modelling (HLM) to analyze data (Shepherd, Patzelt, & Baron, 2013).

Conjoint analysis technique as an experimental method allows researchers to decompose decision-makers' judgment rules by their responses to a series of hypothetical profiles (Karren & Barringer, 2002). The theoretical underpinning of conjoint analysis originated from cognitive psychology. Basically, it assumes that in making decisions, individuals use a number of strategies, or decision rules, that they have in their cognitive repertoire. Their choice of strategies is driven by the characteristics of the task at hand and their individual preferences (Croziers & Raynard, 1997). More specifically, conjoint analysis was inspired by Anderson's information

integration theory (Priem & Harrison, 1994). The theory explains how individuals develop judgements towards an object by mixing, combining, and integrating new information with existing information that they already have in their cognitive repertoire. According to information integration theory, for decision-makers, each piece of information has a specific value (i.e., whether they evaluate it as favorable or unfavorable) and also some degree of perceived importance (i.e., its relative importance in relation to other factors entering into judging the object) that when combined together, affects decision-makers' overall attitude towards that object. If decision-makers perceive the piece of information as both important and favorable, it inclines them to have a favorable attitude towards that situation (Singh, 1975). For instance, if immigrant entrepreneurs consider costs of doing business as an important but unfavorable attribute that negatively impacts their location decisions, they are more likely to give low ratings to location profiles that demonstrate high costs of doing business.

Although conjoint analysis is a suitable research method to answer research questions involving entrepreneurial decision making, its application in entrepreneurship research has been limited (Short, Ketchen, Combs, & Ireland, 2010). What makes conjoint analysis an appropriate method in entrepreneurship research is that it contributes to researchers' understanding of the "theories in use" rather than the "espoused theories of action" that entrepreneurs use in their decision-making processes (Lohrke, Holloway, & Woolley, 2010). However, it is a less popular methodology in entrepreneurship research compared to post-hoc methods (e.g., survey, etc.) (Aguinis & Bradley, 2014). Post-hoc methods are used to collect data about decisions after they are already made (retrospective). Biases (e.g., self-reporting biases, confirmation bias, etc.) and risks (e.g., social desirability, faulty memory or participants' inability to explicate complicated

decision processes, etc.) have been identified as disadvantages of post-hoc methods (Lohrke et al., 2010; Green et al., 2001).

I used conjoint analysis because it enabled me to collect data about respondents' "in-use" decision policies, which was not feasible if I had used a survey or similar post-hoc methodologies. In other words, it minimized the likelihood that above-mentioned biases and issues skew my research findings.

Research Materials

The conjoint survey in my dissertation started with a screening question about respondent's future entrepreneurial intentions. In entrepreneurship research, it is common to use screening questions to set apart individuals who qualify to participate in research (De Carolis, Litzkey, & Eddleston, 2009; Davidsson & Honig, 2003). Likewise, in my research, participants were asked to determine their intention to become an entrepreneur either immediately after graduation or in the future on a 7-point Likert scale. Respondents who did not express any future entrepreneurial intentions were removed from the survey at the beginning whereas those who expressed some degrees of future entrepreneurial intentions proceeded to the next section of the survey. At this point, participants were provided with a consent letter that contained the study information. They were also ensured that the online survey was anonymous. Before they viewed instructions on decision profiles, they were asked to respond to a few multiple-choice questions about the industry in which they intended to start their future business and also about their expected timing of doing so (i.e., on a 7-point scale ranging from "In 0-12 Months" to "In more than 10 Years." Furthermore, they were asked to describe their ethnic heritage in an open-ended question. To determine the decision rules governing highly-educated aspiring immigrant entrepreneurs' start-up location decisions, each participant was first provided with detailed

instructions about the task at hand. Then, they were asked to rate a series of hypothetical location profiles and to state their likelihood to choose that location. In this experiment, I manipulated 5 location-relevant attributes at two levels (high vs. low). In manipulations, "low" did not necessarily mean that the attribute level was zero or negative, rather it implied a low positivity on that attribute. Among all possible attributes, I selected those location attributes that were consistent with ethnic enclave theory (Light, Sabagh, & Bozorgmehr, 1994), heterolocalism theory (Zelinsky & Lee, 1998), and location theory (North, 1955).

If I had used a full-factorial design, participants would have responded to 37 profiles [$(2)^5$ + 4 + 1= 32] (32 original profiles plus 1 practice and 4 repeated profiles] to enable me to test all direct and interaction effects. It is worth noting that the single practice profile, which usually appears at the beginning of conjoint instruments, is not used in data analysis but is used to familiarize respondents with the experiment (Haynie et al., 2009). The 4 repeated profiles enable me to consider test-retest reliability of participants' responses to decision profiles (Karren & Barringer, 2002). The large number of decision profiles in full factorial design is likely to make participants bored and tired and consequently leads them to withdraw or to respond to decision profiles without sufficient attention. On the other hand, in recent entrepreneurship decision-making research, another design called orthogonal fractional factorial design is also used (Buckley, Devinney, & Louviere, 2007; Shepherd et al., 2013). Compared to a full-factorial design, an orthogonal fractional factorial design requires participants to respond to a sub-set of profiles used in a full factorial design (i.e., smaller number of decision profiles) (e.g., Buckley et al., 2007, number of profiles: 32; Shepherd et al., 2013, number of profiles: 25; Haynie et al., 2009, number of profiles: 33). Although participants are given a subset of full profiles, a

fractional factorial design results in robust findings, similar to that of full factorial design (Aiman-Smith et al., 2002).

Consistent with these works, I used a fractional factorial design to reduce the number of profiles per participant. Hence, I required each participant to respond to 21 location profiles, instead of 32 profiles: 16 profiles (half of the original 32 profiles that would be used in the full factorial model), 1 practice profile, and 4 repeated profiles. The reason why I used half of the full decision profiles (i.e., 32 decision profiles) to include in the conjoint instrument was that one common way to develop sub-sets is to divide the full set into halves (Karren et al., 2002). Also, guidelines provided in NIST/SEMATECH e-handbook of Statistical Methods (2012) refer to 16 profiles in a fractional design that derives from a full factorial design including 32 profiles. In choosing among decision profiles to include in the sub-set, I used the algorithm outlined in the 2012 handbook.

At the end of each decision profile, participants were asked to answer to the question: "Based on the attributes described above, how likely are you to choose this location for your start-up?" The responses ranged from "Very Unlikely" to "Strongly Likely" on a 7-point Likert scale. After participants responded to the decision profiles, they were asked to respond to a post-experiment questionnaire which asked them about their demographic characteristics (e.g., age, gender, human capital, university major, etc.) and financial resources.

Sampling and Sample Selection

In my dissertation, highly-educated immigrant entrepreneurs constituted my research population. As I intended to capture the real-time location decisions that immigrant entrepreneurs make, my research sample involved highly-educated first-generation immigrants with future entrepreneurial intentions. In other words, my research sample consisted of

international first-generation graduate students at the University of Tennessee. Eligible students were first-generation immigrants, pursuing a graduate degree in the University of Tennessee at time of the study. In order to generalize my research findings to aspiring immigrant entrepreneurs, I only collected data from first-generation international graduate students who had various degrees of entrepreneurial intentions (Green et al., 2001).

Although, the use of student samples is usually associated with limited generalizability to the population of interest, use of this sampling frame benefited my study in different ways. First, there is evidence that international graduate students are more likely than natives to start successful start-ups in the U.S. (Hunt, 2010). Second, "52.3 percent of immigrant entrepreneurs came to the U.S. as students, stayed there after graduation and founded companies an average of thirteen years after their arrival" (Wadhwa, Rissing, Saxenian, & Gereffi, 2007, p. 3). Therefore, in this study, first-generation international graduate students with entrepreneurial intentions highly approximate highly-educated aspiring immigrant entrepreneurs (i.e., those that have not-yet founded their start-ups). Third, studying aspiring immigrant entrepreneurs' start-up location decisions instead of immigrant entrepreneurs who had already made their start-up location decisions enabled me to capture their real-time decisions free from self-reporting and retrospective biases (Mathias & Williams, 2014).

In order to identify first-generation international graduate students at the University of Tennessee, I contacted all international and ethnic student associations affiliated with the University of Tennessee, including the African Students Association, the Chinese Students and Scholars Association, the Iranian Students Association, etc., and asked them to connect me to their international student members. A few of the associations posted my survey link on their Facebook page, and a few others sent it to their student members via email. In addition, I

contacted UT professors who taught Entrepreneurship courses and asked them to provide my survey link to their students. I also asked respondents via email to introduce to me any other graduate students at UT whom they knew. Later, I forwarded the survey link to those introduced to me. Furthermore, I showed up at campus events that mostly targeted international students, collected the email addresses of those who were willing to participate in my research and later sent my survey link to them.

I started data collection on October 21, 2015 and ended it on February 29, 2016. Overall, I collected data from 87 respondents; however, after reliability tests, 79 of them were usable (i.e. reliable responses without missing data on location profiles). My sample size was consistent with sample sizes in past research using conjoint analysis (e.g., Green et al., 2001, n = 60; Buckley et al., 2007, n = 70; Shepherd, et al., 2013, n = 83; Wood & Williams, 2014, n = 62; Haynie et al., 2009, n = 73; Wood et al., 2014, n = 120). In addition, results of my power analysis (see Chapter 5) demonstrated that my sample size of 79 respondents was sufficient to detect a small effect size at 80 percent.

Validity and reliability checks

Validity tests

Prior to distributing the survey, I conducted validity tests to ensure that my findings represented aspiring highly-educated immigrant entrepreneurs' start-up location decisions. In doing so, I met with 5-6 UT international graduate students with entrepreneurial intentions and asked them to think aloud as they were responding to survey questions. The feedback I got in those 1-2 hour meetings helped me revise the survey's structure and content. I also pre-tested my survey among a group of international graduate students who were taking a conjoint analysis course at UTK and used their feedback and responses for face validity and further for reliability

checks. By and large, the feedback I got from pre-tests helped me improve the flow of the survey and also to make sure that the attributes I was including in my dissertation were relevant. In addition, I conducted a pilot test with 86 undergraduate students who were taking an entrepreneurship class at UTK completed the conjoint instrument. I did not use this data for actual data analysis but I used it to ensure that the instrument's face validity. I also used it to learn how respondents reacted to the survey and also to familiarize myself with the data structure.

To check content validity, I included 5 questions at the end of the post-experiment questionnaire to measure on a 7-point scale how important respondents considered each attribute (e.g., costs of doing business, competition, government support, coethnic SC and non-coethnic SC) in influencing their location decision. Table 4.1 demonstrates attributes' mean and standard deviation. As shown, the mean rating of attributes importance is higher than 4.00 which indicates that respondents considered these attributes as relevant and important in making start-up location decisions.

Insert Table 4.1. about here

In addition, I included an open-ended question at the end of the post-experiment questionnaire in which I asked respondents to write down any other variables that they considered important in making start-up location decisions which were not included in my study. Among those respondents who responded to this question, a few mentioned variables that can be included in the category of costs of doing business, such as transportation costs, costs of land, costs associated with acquiring human capital, etc. This indicated that costs of doing business was a relevant factor in determining highly-educated immigrant entrepreneurs' location decisions. Also, a few respondents mentioned factors including their access to investors,

incubators, and accelerators and rules and regulations that confirm relevance of access to financial capital and government support in immigrants' start-up location decisions. Another variable mentioned by respondents was access to client base, size of the target market, and location-specific business opportunities which all imply the importance of competition in immigrants' start-up location decisions.

Other factors indicated by respondents as important in impacting their start-up location decisions included characteristics of the location, including connectivity to other critical locations such as international transportation hubs, proximity to knowledge bases like universities, access to highly-skilled human capital. Other factors mentioned by respondents which were beyond the scope of my research were location-specific weather, political system and economic stability, location-specific safety and security, and the quality of infrastructures.

Reliability checks

Before and after data collection, I conducted detailed reliability tests to ensure that participants were providing consistent responses to the original and the repeated location profiles. I used four repeated location profiles for reliability checks and included them at the end of the conjoint survey after the 16 original location profiles. In choosing the four repeated location profiles, I used those that were dominantly "positive" or "negative" from the eyes of a potential respondent (e.g. a location profile in which costs of doing business and competition were "low" but government support, coethnic social capital and non-coethnic social capital were "high".) In conducting reliability tests, I ran Pearson correlations between respondents' ratings of the location profile and those of the repeated profiles. Comparison of the correlation coefficients with the accepted threshold for them ($\alpha > 0.70$), revealed that there were several location profiles with low correlation coefficients. I did not choose to immediately remove those respondents

because the decision-making task's difficulty made it unreasonable to expect respondents to provide the same ratings to the main and the respective repeated profiles. In other words, it was more reasonable to expect each individual's reliable responses to fall in a range on a 7-point Likert scale. Along those lines, for each individual respondent, I defined the response inconsistency between the original and the repeated profiles' ratings where there were more than 2-unit difference between the respective ratings. The bottom line was that I considered unreliable respondents as those with two or more than two instances of rating inconsistency across original and repeated profiles. In applying these guidelines to the data, I removed 8 respondents with unreliable responses from data. This diminished the number of usable data from 87 to 79 reliable respondents.

Data Collection and Research Procedures

Data collection took place online via Qualtrics. First, the online survey link was either sent to participants via email or was posted on UTK international student associations' Facebook pages. Upon clicking on the survey link, eligible participants were screened by their response to a screening question about their future entrepreneurial intentions. Then, eligible participants were asked in multiple-choice questions about the industry where they intended to found their business and the expected timeline of doing so. They were also asked to explicate their ethnicity in an open-ended question. Further, participants were directed to the webpage that contained the electronic consent letter and were asked to electronically sign it if they were willing to participate in the research. Then, they were provided with instructions on the decision at task. In order to overcome start-up effects[7] (Aiman-Smith et al., 2002), participants responded to a

[7] Start-up effects refer to participants' unfamiliarity with the procedures of the experiment. Therefore, some time should be allotted to participants who are new to experiment to familiarize them with how to read and respond to scenarios (Aiman-Smith et al., 2002).

practice location profile which aimed to familiarize them with the decision-making task. After the practice profile, they responded to 16 decision profiles in which the 5 location attributes were manipulated at “low” vs. “high” levels. It is worth noting that in addition to the 5 attributes that were randomized in each location profile, the 16 original location profiles were also randomized to overcome order effects. After answering the 16 decision profiles and the 4 repeated ones, participants proceeded to the post-experiment questions. At the end of the survey, they were asked to send an email to the researcher if they wanted to receive an executive summary of the research findings. In responding to the survey, participants could take as much time as they wanted; however, they were recommended to complete it in one session. On average respondents took 35 minutes to complete the conjoint survey.

An example of the conjoint survey with the screening question, consent letter, instructions, practice location profiles, original and repeated profiles, and post-hoc questions are included in the appendix.

Data Analyses

The experiment provided 21 observations per participant and 1659 observations for the entire sample. Among the 21 observations associated with each respondent, I used only the 16 observations that were associated with original profiles. I did not use the practice and repeated profiles data in data analysis or hypothesis testing. I used an orthogonal design to ensure that autocorrelations between location attributes were zero. It also indicated that multicollinearity concerns were addressed and that the experiment was robust (Haynie et al., 2009). I used Hierarchical Linear Modeling (HLM) for data analysis because it accounts for autocorrelations of nested data (Haynie et al., 2009). I conducted HLM in SPSS. Across SPSS outputs, I used intercept and unstandardized coefficient estimates for each decision attribute and their

corresponding standard error, t-ratio, and level of significance to test the main and interaction effects. Also, I used goodness-of-fit measures, Pseudo-R^2 and χ^2 tests to discuss improvement of models' fits.

Variables and Measures

Dependent variable

The dependent variable (DV) in this dissertation is participants' likelihood to choose a start-up location, measured on a 7-point Likert scale, ranging from "Very Unlikely" to "Strongly Likely."

Independent variables

Independent variables (IVs) in this research include location-specific costs of doing business, intensity of competition, government support for immigrant entrepreneurs, participants' co-ethnic social capital, and participants' non-coethnic social capital. I included these IVs based on the theoretically- and practically-relevant location decision considerations outlined in Chapters 2 and 3.

Costs of doing business. The extant literature shows that costs of doing business include tax rates, wage rates, transportation costs of raw materials and final products, and land and property expenses (Blair & Premus, 1987; Charney, 1983). I measured costs of doing business via a composite variable, termed as "costs of doing business" that comprised tax rates, wage rates and transportation costs at any specific location, manipulated at "low'" and "high" levels (see the appendix).

Competition. I operationalized competition, manipulated at "low" vs. "high" levels, as the intensity of competitive behaviors that occur among firms in the same [geographic] market that offers similar products and services to similar customers (Hitt, Ireland, & Hoskisson, 2013).

Government support. Past research on government support initiatives for entrepreneurial businesses highlights the importance of the services provided by local governments to entrepreneurs in terms of tax exemptions, free business counselling, and seminars and workshops about license applications, etc. (Hansen, Rand, & Trap, 2009; Watson, Hogarth-Scott, & Wilson, 1998). In this research, I operationalized government support aimed at immigrant entrepreneurs in terms of business-related training and advice, incubator-related services, tax exemptions, and subsidies that governments offer to attract and encourage immigrants' entrepreneurial activities at certain locations. I manipulated this attribute at "low" vs. "high" levels.

Coethnic social capital. I operationalized immigrant entrepreneurs' coethnic social capital as the number of family members and coethnic friends on whom respondents could rely for support (Westphal, 1999; Chow & Ng, 2004).

Non-coethnic social capital. I defined non-coethnic social capital as the number of friends from ethnicities other than that of the respondents, on whom they could rely for support. Table 4.2 demonstrates operationalization of the independent variables.

Insert Table 4.2. about here

Moderating variables

I hypothesized that immigrant entrepreneurs' identification with their ethnic community, their human capital, and their reliance on ethnic financial capital moderated the positive relationship between their coethnic social capital and their likelihood to choose a location. Further, I hypothesized that immigrant entrepreneurs' human capital moderated the positive relationship between non-coethnic social capital and likelihood to choose a location. In addition, I predicted that immigrant entrepreneurs' non-coethnic social capital weakened the relationship between coethnic social capital and location choice likelihood.

Human capital. I measured human capital as the extent to which they had entrepreneurial experience and paid work experience (i.e., number of years), and their location decision experience (i.e., on a 7-point scale, ranging from "No experience at all" to "Extremely familiar." Entrepreneurial and paid work experiences are commonly-used human capital measures in entrepreneurship and immigrant entrepreneurship research (Liao & Welsch, 2003; Davidsson & Honig, 2003; Marger, 2001; Ndofor & Priem, 2011). Participants' human capital was measured via self-report items in the post-experiment questionnaire.

Financial capital. In immigrant entrepreneurship research, access to financial capital, including personal and family wealth, reliance on low-interest loans funded by ethnic rotating credit associations, and government loans specific to minority-owned businesses have been studied (Sanders & Nee, 1996; Yoon, 1991). To measure financial capital, I asked participants via a post-experiment questionnaire and on a 7-point scale, ranging from "Not at all" to "This is the main financial resource that I will use for my future business" about the extent to which they would use various financial resources (e.g., personal savings, family wealth in the U.S., borrowing money from coethnic friends in the U.S., etc.) to pay their start-up expenses.

Self-identity with coethnic community. Research on immigrants' ethnic identity is well-developed outside the realm of entrepreneurship research. However, few researchers in the entrepreneurship literature have measured immigrants' and ethnic entrepreneurs' ethnic identity. A notable example is Ndofor and Priem's (2011) research in which they measured immigrant entrepreneurs' self-identification via the in-group ties dimension of the York Ethnic Identification scale. Because York Ethnic Identification scale was originally developed to measure gender role identities, I did not use it in my research, instead I measured participants' self-identification with their coethnic community, using the affirmation and belonging

dimensions of Phinney's (1992) Multi-group Ethnic Identity scale. This scale has been developed specifically for measuring immigrants' self-identification in the host country which fits my research.

Control variables

I controlled for immigrant entrepreneurs' gender, the industry in which they intended to found their business, their field of graduate study, and their place (country) of birth. I controlled for gender because entrepreneurs' gender influences their access to various types of capital and their strategies in deploying resources (Dallalfar, 1994). I controlled for participants' intended industry and field of study because the industry in which immigrant-owned businesses operate and their activities determine their location patterns (Zhou, 1998). Furthermore, I controlled for respondents' place of birth because according to past research, it is possible to distinguish between strategic behaviors of immigrant entrepreneurs who come from different countries (Raijman & Tienda, 2010; Fong et al., 2008).

Chapter Summary

In Chapter 4, I discussed conjoint analysis as my research method for testing the hypotheses that predict highly-educated aspiring immigrant entrepreneurs' start-up location decisions, using a sample of first-generation international graduate students at the University of Tennessee. In addition, I elaborated on how I selected the participants for my study and how I conducted validity and reliability tests to ensure the robustness of findings. In addition, I discussed data analysis, using HLM. I conclude the Chapter with explaining the operationalization of the study variables.

Chapter 5

Results

Chapter Overview

In Chapter 5, I provide a detailed discussion of data analysis and results of my dissertation. In analyzing the nested data in my dissertation, I used hierarchical linear modelling. I start Chapter 5 with a discussion of statistical power analysis. Then, I proceed with descriptive statistics before presenting my results of testing the hypotheses. Before proceeding with each hypothesis, I provide an overall summary of the results of my dissertation. Then, for each hypothesis, I first explain whether they were statistically supported. Then, I discuss model fit changes as a result of adding predictors and moderating variables to the model. In addition, I elaborate on findings of my post-hoc analyses. I conclude this chapter with a summary of results.

Statistical Power Analysis

In order to determine the total sample size necessary, I conducted a power analysis for which I used the Optimal Design software (Spybrook, Bloom, Congdon, Hill, Martinez, & Raudenbush, 2011). I set the Type I error (α) at 0.05, n = 16 (number of decision profiles nested in each respondent), the effect size = 0.20 (small effect size), and ρ (ICC) at 0.05. Along those lines, ICC usually ranges between 0.05 and 0.20. At the same time a value between 0.10 and 0.15 is considered a conservative estimate. Therefore, in running the power analysis for my data, I set the ρ (ICC) at 0.05 (Scherbaum & Ferreterm, 2009). Below is the graph that depicts various sample sizes at different levels of statistical power.

Insert Figure 5.1. about here

Results of power analysis in Figure 5.1 shows that assuming that each respondent rates 16 decision profiles, approximately 75-80 respondents are necessary to achieve the power of 80 percent at the α of 0.05.

Study Results

Descriptive statistics

The 79 participants who provided complete responses to location decision profiles provided 1264 useable decisions for the analysis. This is consistent with sample size reported in past research in Management and Entrepreneurship (Haynie et al., 2009, n = 73; McKelvie et al., 2011, n = 69; & Wood & Williams, 2014, n = 62). Table 5.1 shows descriptive statistics for the dependent, moderator, and control variables in my study. The information presented in Table 5.1 is associated with non-centered variables. Across respondents, 55 were men and 23 were women. In response to the question that asked them to determine the industry for their future business, 6 chose agriculture, 2 selected trade, 51 picked services, and 16 opted for other industries. Among research participants, 6 were born in Africa, 41 in Asia, 1 in Central America, 25 in Middle East, 1 in Oceania, and 4 in Europe. In terms of their graduate university major, the major with the minimum number of participants was architecture with only 1 respondent and the major with the maximum number of respondents was engineering with 49 respondents. Respondents' mean score for identification with their coethnic community was 5.48 (on a Likert scale ranging from 1 representing "Very unlikely" to 7 representing "Strongly likely") with the standard deviation of 1.20. In regards to human capital, the average number of years of entrepreneurial experience was 0.52 with standard deviation of 1.50. For paid work experience, the average number of years was 3.94 with standard deviation of 3.96. In terms of respondents' experience in making business

location decisions, the average was 3.02 (on a Likert scale ranging from 1 representing “No experience at all” to 7 representing “Extremely familiar”) with the standard deviation of 1.72.

Insert Table 5.1. about here

The data in my dissertation is nested which means that some variables are clustered or nested within other variables. It consists of decision profiles rated by individual respondents. In terms of multi-level modelling, I consider each decision profile as level 1. The individual to whom a decision profile belongs is a level up from the decision profile in the hierarchy, and I consider them to be a level 2 variable. That said, my dissertation data lends itself to hierarchical linear modelling (HLM). In order to prepare data for hierarchical linear modelling, I restructured it. In so doing, first, I mean-centered the continuous variables and if necessary. Furthermore, I computed the compound (moderation) variables that consisted of more than one item. Then, I inserted the data into SPSS, and restructured it.

Null model

Before running full models, it is necessary to examine the variance components using the null (no-predictor model) (Heck, Thomas, & Tabata, 2014, P. 89). In developing the null model, the aim is to partition the variance in the dependent variable (DV) into level-1 (at the decision profile-level) and level-2 (individual-level) components. This contributes to one’s understanding of how much of the variance in DV (respondents’ likelihood to choose a location) resides at each level of analysis (level 1 and level 2). The null model also provides an estimated mean rating of the DV for all respondents. In other words, the null model was a basic model in which I set all parameters as fixed.

Results associated with the null model showed that the intercept (i.e., the average likelihood to choose a location across all respondents) was 4.38 on a Likert scale (std. error =

0.06, $p \leq 0.00$). The measure to distinguish between proportions of the variance that is common to level 2, as opposed to the variation that is associated with the likelihood to choose a location at level 1 is Inter Class Correlation (ICC). In other words, ICC is the proportion of the level-2 variance to the total variance in DV. High ICC indicates that the higher-level grouping affects the estimates in a meaningful way. Researchers use 0.05 as a cut-off rule of thumb to judge about the size of ICC. Therefore, where ICC is smaller or equal to 0.05, HLM is not necessary because it indicates that the hierarchical grouping of the data does not significantly affect the estimates (Heck et al., 2014). In other words, low ICC shows that there is not enough variance to be explained at level 2. In my dissertation, the ICC associated with null model was 5%. This indicated that 5% of the variance in the model was attributed to the variability at level 2. In other words, it is possible to explain 95% of variance in DV at level 1. Because my ICC is right at the cut-off, I selected the conservative approach and used HLM. I calculated ICC based on the formula below where σ^2_B refers to estimate of intercept variance and σ^2_W refers to estimate of residual variance of the null model:

$$ICC = \sigma^2_B / (\sigma^2_B + \sigma^2_W)$$

$$ICC_{Null\ Model} = 0.15 / (3.04 + 0.15) = 0.05$$

Insert Table 5.2. about here

Table 5.2 provides results of residual and intercept variance for the null model. Residual variance shows the variance in the likelihood to choose a location at level 1. As Table 5.2 suggests, there was significant variance to be explained at level 1 (Wald $Z = 24.34$, $p \leq 0.00$) and at level 2 (Wald $Z = 2.79$, $p \leq 0.01$). The significant variance to be explained at both level 1 and level 2, further justifies the use of HLM to analyze my dissertation data.

Control variable models

Findings of step 1 (null model) showed that when there were no predictors in the model, the intercept varied significantly across individual respondents. Before adding the independent variables to the model, I ran the model only with control variables. Control variables in my study included respondents' gender, university major, place of birth, and the industry in which they intended to start their future business. All control variables, including gender (male and female), major (agriculture, engineering, architecture, business, communication, education, and arts & science), place of birth (Africa, Asia, Central America, Middle East, Oceania, and Europe), and intended industry (agriculture, trade, service, manufacturing, & others) were categorical. Table 5.3 represents the parameters' estimates, standard error and t-ratio for all control variables. There were no significant relationships between control variables and the likelihood to choose a location with the exception of being born in Africa and Middle East which were marginally significant.

Insert Table 5.3. about here

After, adding the control variables to the model, I ran the level-1 model by including the independent variables (e.g., costs of doing business, competition, government support, coethnic social capital, and non-coethnic social capital) as fixed parameters in it; however, I allowed the intercept to vary (set it random).

Before proceeding to a detailed review of the results of the dissertation, I provide a summary here of the overall results of the tests of the hypotheses predicted in Chapter 3. The main effect of costs of doing business ($b = -1.07$, $p < 0.001$) and government support ($b = 1.28$, $p < 0.001$), coethnic social capital ($b = 0.48$, $p < 0.001$) and non-coethnic social capital ($b = 0.32$, $p < 0.001$) on likelihood to choose a location were significant and positive, but the impact of

competition on the likelihood to choose a location was significant and negative ($b = -0.75$, $p < 0.001$). These results support Hypotheses 1-4, as I outline in more detail below.

The moderating effect of non-coethnic social capital, identification with ethnic community and reliance on ethnic financial capital on coethnic social capital was not significant. Furthermore, the moderating effect of human capital on coethnic social capital was non-significant, except for the moderating effect of one component of human capital, namely past paid work experience which was significant and positive. These results do not support Hypotheses 5-9.

In addition, I ran a few post-hoc analyses. Findings of the post-hoc analyses showed that location-specific competition positively and significantly moderated the negative relationship between costs of doing business and location decision likelihood ($b = 0.28$, $p < 0.10$). In other words, at high levels of competition, the negative relationship between costs of doing business and location decision likelihood became weaker. In another post-hoc analyses, the findings showed that respondents' reliance on their ethnic financial capital negatively and significantly moderated the negative relationship between costs of doing business and location decision likelihood ($b = 0.14$, $p < 0.05$), such that the negative relationship between costs of doing business and location decision likelihood became weaker at high reliance on ethnic financial capital. Finally, results obtained from post-hoc analyses showed that reliance on ethnic financial capital moderated the positive relationship between government support and location decision likelihood ($b = -0.13$, $p < 0.05$). In other words, at high levels of reliance on ethnic financial capital, the positive relationship between government support and location decision likelihood weakened. The following sections examine these results in more detail.

Testing hypotheses: Main effects

Main effect: Costs of doing business → Likelihood to choose a location

Hypothesis 1 predicted that the likelihood to choose a location increased as location-specific costs of doing business decreased. As shown in Table 5.4, I observed that the coefficient of cost of doing business was negative and significant ($b = -1.07$, $p < 0.001$). This indicated that respondents' likelihood to choose a location increased when costs of doing business was low as opposed to high. Particularly, as costs of doing business went from high to low, there was a 1.07-unit decrease in the likelihood to choose a location, or a 15.29% decrease on the 7-point scale for likelihood to choose a location. These findings provided support for hypothesis 1.

Insert Table 5.4. about here

Main effect: Competition → Likelihood to choose a location

Hypothesis 2 predicted that the likelihood to choose a location increased as location-specific competition decreased. As shown in Table 5.4, the coefficient for competition was significant and negative ($b = -0.75$, $p < 0.001$). The finding indicated that respondents' likelihood to choose a location increased when competition was low as opposed to high. For every unit increase in competition, a 0.75-unit decrease in the likelihood to choose a location or a 10.71% decrease on a 7-point scale was predicted. These findings provided support for hypothesis 2.

Main effect: Government support → Likelihood to choose a location

Hypothesis 3 predicted that the likelihood to choose a location increased as location-specific government support increased. As illustrated in Table 5.4, the coefficient for government support was positive and significant ($b = 1.28$, $p < 0.001$). This indicated that respondents' likelihood to choose a location was higher when government support associated

with that profile was high as opposed to low. In other words, for every unit increase in government support, a 1.28-unit increase in the likelihood to choose a location which is equivalent to 18.28% increase on a 7-point scale was predicted. This finding supported hypothesis 3.

Main effect: Coethnic social capital → Likelihood to choose a location

Hypothesis 4a predicted that the likelihood to choose a location increased as location-specific coethnic social capital increased. Table 5.4 shows that the coefficient for coethnic social capital was significant and positive ($b = 0.48$, $p < 0.001$). This demonstrated that the likelihood to choose a location increased significantly when coethnic social capital associated with the location profile was high as opposed to low. Particularly, for every unit increase in respondents' coethnic social capital, a 0.48-unit increase in the likelihood to choose a location or a 6.85% increase on a 7-point scale was predicted. These findings provided support for hypothesis 4a.

Main effect: Non-coethnic social capital → Likelihood to choose a location

Hypothesis 4b predicted that the likelihood to choose a location increased as location-specific non-coethnic social capital increased. According to findings reported in Table 5.4, the coefficient for non-coethnic social capital was significant and positive ($b = 0.32$, $p < 0.001$). This signified that respondents' likelihood to choose a location was higher when the non-coethnic social capital associated with that location was high as opposed to low. Specifically, the results show that for every unit increase in non-coethnic social capital, a 0.32-unit increase in likelihood to choose a location or a 4.57% increase on the 7-point scale occurred. The findings supported hypotheses 4b.

Assessment of model fit

In this section, I discuss whether adding predictors to the model made any difference to the model fit. I used the change in the Log-Likelihood value (-2LL) (Chi-square change) test to assess model's fit. (-2LL) represents (-2) Log Likelihood and K represents number of parameters in each model. By old model, I refer to the model that included only control variables and by new model, I refer to the model that included both the controls and the level 1 independent variables:

χ^2_{Change}: -2LL $_{Old}$ - $(-2LL)_{New}$ = 4962.596 – 4514.237 = 448.359

df_{Change}: $K_{Old} - K_{New}$ = 22 – 27 = -5

As shown in Table 5.5, the (-2LL) was smaller for the new model, compared to the old model which implied the new model's better fit. The critical value for the Chi-square statistic for 5 degrees of freedom is 11.07 ($p \leq 0.05$); therefore, the change in the new model's fit was highly significant. In other words, addition of the level 1 independent variables to the model significantly improved the new model's fit. Two other measures that also indicated the model's fit are Akaike's Information Criterion (AIC) and the Schwarz's Bayesian Criterion (BIC). These are adjusted versions of (-2LL) that have been corrected in different ways. AIC is a goodness-of-fit measure that takes into account the number of the estimated parameters. BIC is similar to AIC, but it is more conservative. It is important to note that AIC and BIC are useful for comparing the goodness of fit of the models that build on each other. Smaller values of these statistics in models that build on previous models indicate that the latter are better-fitting models (Field, 2013).

Insert Table 5.5. about here

As shown in Table 5.5, both AIC and BIC values were smaller in the new model compared to the old model which was indicative of the new model's better fit. In addition, comparison of values

of Pseudo-R^2 for the old and the new models showed that adding predictors to the old model, explained 32% of level-1 variability in likelihood to choose a location. It's worth noting that Pseudo-R^2 is similar to R^2 in Ordinary Least Squares (OLS) regressions. It provides an indication of the proportion of the variance accounted for in the level-1 DV by level-1 predictors. Below is the formula suggested by Heck et al. (2014) to compute variance explained in the DV where σ^2_{M1} refers to the residual variance of the old model (e.g., the controls-only model) and σ^2_{M2} refers to the residual variance in the new model (e.g. model with predictors).

Level-1 Variance Explained (Pseudo-R^2) = $(\sigma^2_{M1} - \sigma^2_{M2}) / \sigma^2_{M1}$

Below, I computed the Pseudo-R^2 of the old and the new models:

Pseudo-$R^2_{\text{Controls Only Model}}$ = (3.04 – 3.04) / 3.04 = 0

Pseudo-$R^2_{\text{Predictor Model}}$ = (3.01-2.03) / 3.01 = 0.32

As shown in Table 5.6, introduction of predictors to the model decreased the variance remaining at Level 1 (i.e., from 3.04 to 2.03). Furthermore, the remaining variance at level 1 was still significant (Wald Z = 2.03, $p <= 0.001$) which indicated that even after adding 5 predictors to the model, there was still variance that could be explained by addition of other variables to the model.

Insert Table 5.6. about here

Level 2 (individual-level) models

In this step and prior to addition of interaction terms, I added level-2 (individual-level) variables to the model to explain the variability in intercepts across respondents. In this study, my thesis was that level-2 variables (e.g., identification with coethnic community, human capital and reliance on ethnic financial capital) impacted the remaining variability in the DV as moderators of the level 1 effects described above. Because Table 5.7 highlights that the main

effects of all coefficient estimates of level-2 variables were statistically non-significant, I do not provide any explanations about their magnitude and direction. Instead, I move on to discuss the tests of moderation effects for hypotheses 5, 6, 7, 8, and 9.

Insert Table 5.7. about here

Interaction effects

In the following section, I provide results of my tests of the moderation hypotheses (hypotheses 5-9) to predict likelihood to choose a location. Except for the interaction between coethnic social capital and non-coethnic social capital that were both at level 1, the remaining interactions were cross-level because they involved a level-2 variable (e.g., identification with coethnic community, etc.) interacting with a level-1variable (e.g., coethnic social capital). In the following sections, I discuss the moderating effect of non-coethnic social capital, identification with ethnic community, reliance on ethnic financial capital, and human capital on coethnic social capital. In addition, I provide explanations about the interaction between human capital and non-coethnic social capital.

Interaction: Coethnic social capital x non-coethnic social capital

In hypothesis 5, I predicted that non-coethnic social capital moderated the relationship between coethnic social capital and the likelihood to choose a location such that the positive relationship became less positive as non-coethnic social capital increased. As Table 5.8 shows, the moderating effect of non-coethnic social capital on coethnic social capital was non-significant ($b = -0.192$, $p > 0.1$). This did not provide support for hypothesis 5.

Insert Table 5.8. about here

Model fit: Coethnic social capital x non-coethnic social capital

As shown in Table 5.9, the new model's (-2LL), AIC, and BIC values were larger than those of the old model. Therefore, introduction of the interaction parameter between coethnic social capital and non-coethnic social capital did not improve the new model's fit.

Insert Table 5.9. about here

The new model's Pseudo-R^2 showed that the interaction between coethnic social capital and non-coethnic social capital did not account for any level 1 variability in respondents' likelihood to choose a location. Comparing the values of χ^2_{Change} statistics for -2LL (-0.47), AIC (-0.47), BIC (-0.47), and Pseudo-R^2 (-0.47) with the critical value of the χ^2 statistic associated with df = 1 (i.e., 3.84, $p < 0.05$) showed that the change in new model's fit was non-significant. In other words, addition of the interaction term did not improve new model's fit. Results of the model's random parameters in Table 5.10 shows that introduction of interaction between coethnic social capital and non-coethnic social capital did not reduce the residual variability at level 1 (from 2.03 in level-1 model to 2.03 in Level-2 model). Overall, introduction of the interaction term did not improve the new model's fit. In order to ensure that the non-significant moderating effect was caused by small effect size and not by low power, I ran post-hoc power analysis suggested by Mathieu et al. (2010) for the model that contained the interaction between coethnic social capital and non-coethnic social capital and obtained a power estimate of 0.62. This indicates that there was a 62% chance of detecting the effect at the significance level of 0.05. Typically, we prefer 80%; therefore, 62% suggests that power may be a contributing factor.

Insert Table 5.10. about here

Interaction: Coethnic social capital x identification with coethnic community

In hypothesis 6, I hypothesized that identification with ethnic community moderated the relationship between coethnic social capital and likelihood to choose a location such that the positive relationship became more positive as identification increased. According to the findings presented in Table 5.11, the coefficient for this interaction was not significant ($b = 0.049$, $p > 0.1$). This indicated that the relationship between coethnic social capital and respondent's likelihood to choose a location was not moderated at different levels of identification with ethnic community in the host country. Therefore, hypothesis H6 was not supported.

Insert Table 5.11. about here

Model fit: Coethnic social capital x identification with coethnic community

As shown in Table 5.12, (-2LL), AIC, and BIC of the new model were larger than those of the old model. This indicated that the interaction did not improve fit of the new model. In addition, Pseudo-R^2 of the new model shows that the interaction term did not account for any variability in the likelihood to choose a location. Comparing the values of χ^2_{Change} statistics for -2LL (-3.01), AIC (-3.01), BIC (-3.01), and Pseudo-R^2 (-3.01) with the critical value of the χ^2 statistic with df = 1 (i.e., 3.84, $p < 0.05$) shows that the change in the fit of the new model is non-significant. In other words, addition of the interaction term did not improve new model's fit.

Insert Table 5.12. about here

Furthermore, results of model's random parameters in Table 5.13 shows that introduction of the interaction between coethnic social capital and identification with coethnic community did not reduce the residual variability at level 1 (from 2.03 in the old model to 2.03 in the new model).

Insert Table 5.13 about here

Interaction: Coethnic social capital x human capital

In hypothesis 7, I hypothesized that human capital moderated the relationship between coethnic social capital and the likelihood to choose a location such that the positive relationship became less positive as human capital increased. Because in my dissertation, human capital consisted of three components (e.g., entrepreneurial experience, paid work experience, and location decision experience), I ran the interactions between them and coethnic social capital separately. Below, I discuss each of them individually.

Coethnic social capital x entrepreneurial experience

As part of hypothesis 7, I examined the sub-hypothesis regarding the interaction between entrepreneurial experience and coethnic social capital. In so doing, I examined whether the interaction weakened the relationship between coethnic social capital and the likelihood to choose a location. According to the findings presented in Table 5.14, the coefficient for interaction between coethnic social capital and entrepreneurial experience was not significant ($b = 0.04$, $p > 0.10$). This indicated that the relationship between coethnic social capital and respondents' likelihood to choose a location was not moderated at different levels of entrepreneurial experience.

Insert Table 5.14. about here

Model fit: Coethnic social capital x entrepreneurial experience

Insert Table 5.15. about here

As shown in Table 5.15, (-2LL), AIC, and BIC associated with the new model were larger than those of the old model. Therefore, introduction of interaction did not improve new model's fit. Furthermore, comparison of Pseudo-R^2 of the old and new model shows that introduction of the interaction term did not account for any level-1 variability in the likelihood to choose a location.

Comparing the values of χ^2_{Change} statistics for (-2LL), AIC, BIC, and Pseudo-R^2 with the critical value of the χ^2 statistic for df = 1 (i.e., 3.84, $p < 0.05$) shows that the change in the fit of the new model is non-significant. In other words, addition of the interaction term did not improve the new model's fit. Results of the model's random parameters in Table 5.16 shows that introduction of the interaction between coethnic social capital and entrepreneurial experience did not reduce the residual variability at level 1 (From 2.05 in the old model to 2.05 in the new model).

Insert Table 5.16. about here

Coethnic social capital x paid work experience

As part of hypothesis 7, I also examined whether respondents' paid work experience (the second category of human capital) moderated the relationship between coethnic social capital and the likelihood to choose a location. According to the findings presented in Table 5.17, the coefficient for the interaction was significant but small ($b = 0.07$, $p < 0.05$). This indicated that the relationship between coethnic social capital and the likelihood to choose a location was positively moderated by paid work experience. Therefore, hypothesis 7 was not supported.

Insert Table 5.17. about here

To interpret the nature of the moderating effect, I graphed it in Figure 5.2. As it shows, at high levels of paid work experience (one standard deviation above the mean), the effect of coethnic social capital on the likelihood to choose a location was stronger than at low levels of paid work experience (one standard deviation below the mean). This is the opposite of the effect predicted in hypothesis 7.

Insert Figure 5.2. about here

Model fit: Coethnic social capital x paid work experience

Insert Table 5.18. about here

As shown in Table 5.18, the new model's (-2LL), AIC, and BIC were larger than those of the old model. This indicated that with introduction of the interaction, the new model's fit did not improve.

Furthermore, comparison of Pseudo-R^2 of the old and new model showed that introduction of the interaction term only accounted for a small variance in the likelihood to choose a location (Pseudo-R^2 change of 0.4%). Comparing the values of χ^2_{Change} statistics for (-2LL), AIC, BIC, and Pseudo-R^2 with the critical value of the χ^2 statistic for df = 6 (i.e., 12.59, $p < 0.05$) showed that the change in the fit of the new model was non-significant. In other words, addition of the interaction term did not improve the new model's fit. Results of model's random parameters in Table 5.19 shows that introduction of interaction between coethnic social capital and paid work experience reduced the residual variability at level 1 (From 2.05 in the old model to 2.04 in the new model). Overall, the results of the new model's fit assessment showed mixed findings. In other words, in spite of the significant parameter, it is worth noting that the variance explained by the interaction (Pseudo-R^2 increase of 0.4%) as well as the lack of improvement in the new model's fit, suggested that the moderating effect may be small.

Insert Table 5.19. about here

Coethnic social capital x location decision experience

As part of hypothesis 7, I examined whether respondents' location decision experience (the third measure of human capital) moderated the relationship between coethnic social capital and the likelihood to choose a location. The interaction coefficient ($b = 0.04$, $p > 0.10$) showed

that the relationship between coethnic social capital and the likelihood to choose a location was not significantly moderated by respondents' location decision experience. In other words, regardless of respondents' location decision experience, their likelihood to choose a location was high when coethnic social capital associated to that location was high.

Insert Table 5.20. about here

Model fit: Coethnic social capital x location decision experience

As shown in Table 5.21, (-2LL), AIC, and BIC associated with the new model were larger than those of the old model. Therefore, the introduction of interaction did not improve the new model's fit. Furthermore, comparison of Pseudo-R^2 of the old and new model showed that introduction of the interaction term did account for any level-1 variability in the likelihood to choose a location.

Insert Table 5.21. about here

Comparing χ^2_{Change} values for (-2LL), AIC, BIC, and Pseudo-R^2 with the critical value of the χ^2 statistic with df = 1 (i.e., 3.84, $p < 0.05$) showed that the change in the new model's fit was non-significant. In other words, addition of the interaction term did not improve the new model's fit. Results of model's random parameters in Table 5.22 shows that introduction of interaction between coethnic social capital and location decision experience did not reduce the residual variability at level 1 (From 2.05 in the old model to 2.05 in the new model). Overall, inclusion of the interaction did not improve the new model's fit.

Insert Table 5.22. about here

Wrap-up: Coethnic social capital x human capital

Across three components of human capital, only the interaction between coethnic social capital and paid work experience was significant; however, its magnitude was small (b = 0.07, p

<0.01) and the effect was in the opposite direction of my hypothesis. That said, the moderating relationship between entrepreneurial experience and coethnic social capital was not significant (b = 0.04, p > 0.10). Furthermore, location decision experience did not moderate the relationship between coethnic social capital and the likelihood to choose a location (b = 0.04, p > 0.10). Therefore, I conclude that while there is partial support for the moderating effect of human capital on coethnic social capital, hypothesis 7 is not supported.

Interaction: Coethnic social capital x ethnic financial capital

Hypothesis 9 predicted that reliance on coethnic financial capital moderated the relationship between coethnic social capital and likelihood to choose a location, such that the positive relationship became more positive when reliance on ethnic financial capital increased. The interaction coefficient (b = -0.11, p > 0.10) shows that the relationship between coethnic social capital and location profile ratings was not significantly moderated by respondents' reliance on ethnic financial capital (Table 5.23). In other words, regardless of the extent to which respondents relied on ethnic financial capital, their likelihood to choose a location was higher when coethnic social capital was higher. These findings did not provide any support for hypothesis 9.

Insert Table 5.23. about here

Model fit: Coethnic social capital x ethnic financial capital

Insert Table 5.24. about here

As shown in Table 5.24, (-2LL), AIC, and BIC of the new model were larger than those of the old model. This indicated that with introduction of the interaction, the new model's fit did not improve. Therefore, introduction of the interaction did not improve new model's fit.

Furthermore, comparison of Pseudo-R^2 of the old and new model shows that introduction of the interaction term only accounted for a small variance in the likelihood to choose a location (Pseudo-R^2 change of 0. 4%). Comparing the values of χ^2_{Change} statistics for (-2LL), AIC, BIC, and Pseudo-R^2 with the critical value of the χ^2 statistic with df = 1 (i.e., 3.84, $p < 0.05$) showed that the change in the new model's fit was non-significant. In other words, addition of the interaction term did not improve the new model's fit. Results of model's random parameters in Table 5.25 shows that introduction of interaction between coethnic social capital and reliance on ethnic financial capital reduced the residual variability at level 1 (From 2.05 in the old model to 2.04 in the new model). Overall, addition of the interaction to the new model did not improve its fit.

Insert Table 5.25. about here

Interaction: Non-coethnic social capital x human capital

Hypothesis 8 predicted that human capital moderated the relationship between non-coethnic social capital and the likelihood to choose a location, such that the positive relationship became less positive as human capital increased. Similar to the section where I discussed the interaction between human capital and coethnic social capital, in this section, I provide the results of my research regarding the moderating effects of the three components of human capital, namely entrepreneurial experience, paid work experience, and location decision experience on non-coethnic social capital individually.

Non-coethnic social capital x entrepreneurial experience

Part of hypothesis 8 predicted that entrepreneurial experience moderated the relationship between non-coethnic social capital and the likelihood to choose a location, such that the positive relationship became less positive as entrepreneurial experience increased. As Table 5.26 shows,

entrepreneurial experience did not significantly moderate the relationship between non-coethnic social capital and the likelihood to choose a location ($b = -0.03$, $p > 0.1$). In other words, entrepreneurial experience did not change the strength and direction of the positive relationship between non-coethnic social capital and the likelihood to choose a location. Therefore, sub-hypothesis 8 that predicted the interaction between entrepreneurial experience and non-coethnic social capital was not supported.

Insert Table 5.26. about here

Model fit: Non-coethnic social capital x entrepreneurial experience

As shown in Table 5.27 (-2LL), AIC, and BIC associated with the new model were larger than those of the old model. Therefore, the introduction of interaction did not improve the new model's fit. Furthermore, comparison of Pseudo-R^2 of the old and the new model showed that introduction of the interaction term did account for any level-1 variability in the likelihood to choose a location. Comparing the values of χ^2_{Change} statistics for (-2LL), AIC, BIC, and Pseudo-R^2 with the critical value of the χ^2 statistic for df = 1 (i.e., 3.84, $p < 0.05$) showed that the change in the new model's fit was non-significant. In other words, addition of the interaction term did not improve the new model's fit. Results of model's random parameters in Table 5.28 shows that introduction of interaction between non-coethnic social capital and entrepreneurial experience did not reduce the residual variability at level 1 (From 2.05 in the old model to 2.05 in the new model). Overall, the inclusion of the interaction term did not improve the new model's fit.

Insert Table 5.27. about here

Insert Table 5.28. about here

Non-coethnic social capital x paid work experience

Part of hypothesis 8 predicted that paid work experience moderated the relationship between non-coethnic social capital and the likelihood to choose a location, such that the positive relationship became less positive as paid work experience increased. I observed that the interaction coefficient of the relationship between non-coethnic social capital and paid work experience was not significant which indicated that paid work experience did not significantly moderate the relationship between non-coethnic social capital and the likelihood to choose a location ($b = 0.01$, $p > 0.10$). That said, regardless of paid work experience, respondents' likelihood to choose a location was higher when the non-coethnic social capital associated with that location was higher.

Insert Table 5.29. about here

Model fit: Non-coethnic social capital x paid work experience

As shown in Table 5.30, (-2LL), AIC, and BIC associated with the new model were larger than those of the old model. Therefore, introduction of the interaction did not improve the new model's fit.

Insert Table 5.30. about here

Furthermore, comparison of Pseudo-R^2 of the old and the new model showed that introduction of the interaction term did account for any level-1 variability in the likelihood to choose a location. Comparing the values of χ^2_{Change} statistics for (-2LL), AIC, BIC, and Pseudo-R^2 with the critical value of the χ^2 statistic with df = 1 (i.e., 3.84, $p < 0.05$) showed that the new model's fit was non-significant. In other words, addition of the interaction term did not improve the new model's fit. Results of model's random parameters in Table 5.31 showed that

introduction of interaction between non-coethnic social capital and paid work experience did not reduce the residual variability at level 1 (From 2.05 in the old model to 2.05 in the new model). Overall, addition of the interaction term did not improve the new model's fit.

Insert Table 5.31. about here

Non-coethnic social capital x location decision experience

Part of hypothesis 8 predicted that location decision experience moderated the relationship between non-coethnic social capital and the likelihood to choose a location, such that the positive relationship became less positive as location decision experience increased. In Table 5.32, the coefficient related to the interaction of location decision experience with non-coethnic social capital in impacting the likelihood to choose a location is reported ($b = -0.04$, $p > 0.1$). Based on the results, location decision experience did not significantly moderate the relationship between non-coethnic social capital and the likelihood to choose a location. That said, the sub-hypothesis about the interaction between non-coethnic social capital and location decision experience was not supported.

Insert Table 5.32. about here

Model fit: Non-coethnic social capital x location decision experience

As shown in Table 5.33, (-2LL), AIC, and BIC associated with the new model were larger than those of the old model. Therefore, introduction of the interaction term did not improve the new model's fit. Furthermore, comparison of Pseudo-R^2 of the old and the new model showed that introduction of the interaction term did not account for any level-1 variability in the likelihood to choose a location. Comparing the values of χ^2_{Change} statistics for (-2LL), AIC, BIC, and Pseudo-R^2 with the critical value of the χ^2 statistic for df = 1 (i.e., 3.84, $p < 0.05$) showed that the change in the new model's fit was non-significant.

Insert Table 5.33. about here

In other words, addition of the interaction term did not improve the new model's fit. Results of model's random parameters in Table 5.34 shows that the introduction of interaction between non-coethnic social capital and location decision experience did not reduce the residual variability at level 1 (From 2.05 in the old model to 2.05 in the new model). Overall, addition of the interaction term to the new model did not improve its fit.

Insert Table 5.34. about here

Wrap-up: Non-coethnic social capital x human capital

Based on the findings reported in previous sections, the interaction between non-coethnic social capital and the three components of human capital (e.g., entrepreneurial experience, paid work experience, and location decision experience) were not significant. Therefore, hypothesis 8 was not supported.

Post-Hoc analyses

In the following section, I discuss the three moderating relationships that I examined post-hoc. These include the interaction between costs of doing business and competition, between costs of doing business and reliance on ethnic financial capital, and between government support and reliance on ethnic financial capital.

Interaction: Costs of doing business x competition

As a post-hoc analysis, I examined the moderating effect of location-specific competition on costs of doing business (two of the level 1 main effects). My post-hoc hypothesis before running this interaction was that as location-specific competition increased, the negative relationship between costs of doing business and the likelihood to choose a location became

more negative. In other words, I expected that the combination of competition and costs of doing business together would be stronger than the independent effects of each on the likelihood of selecting a location. In Table 5.35, the coefficient related to the interaction of competition and costs of doing business is reported (b = 0.28, p = 0.07). Based on the results, competition significantly moderated the negative relationship between costs of doing business and location profile ratings.

Insert Table 5.35. about here

In order to understand the nature of the interaction effect, I graphed it in Figure 5.3 and calculated the simple slopes for each line in Figure 5.3. As shown, at high levels of competition (one standard deviation above mean), the negative relationship between location-specific costs of doing business and the likelihood to choose a location became weaker (simple slope = -0.97). In contrast, at low levels of location-specific competition (one standard deviation below mean), the relationship between costs of doing business and the likelihood to choose a location was stronger (simple slope = -1.25). This was opposite of my hypothesized relationship. One explanation is that when location-specific competition is low, immigrants interpret it as a sign of the unfavorability of the location (e.g., "if that's a good location, why has nobody else explored it before?"); and therefore, they become tougher in evaluating the location based on its costs of doing business (e.g. "This is an unpopular location for business purposes, and its costs of doing business is high! Therefore, I am not going to pick it as my start-up location!"). This explanation could be examined more directly in future research.

Insert Figure 5.3. about here

Model fit: Costs of doing business x competition

As shown in Table 5.36, (-2LL), AIC, and BIC associated with the new model were larger than those of the old model. Therefore, the introduction of interaction did not improve new model's fit.

Insert Table 5.36. about here

Furthermore, the introduction of the interaction term accounted for only 0.4% variability in the likelihood to choose a location, which was smaller than the old model's Pseudo-R^2. This meant that the interaction term accounted for less variability in the likelihood to choose a location, compared to the model that did not include the interaction term. Comparing the values of χ^2_{Change} statistics for (-2LL), AIC, BIC, and Pseudo-R^2 with the critical value of the χ^2 statistic for df = 60 (i.e., 79.08, $p < 0.05$) showed that the change in the fit of the new model was non-significant. In other words, addition of the interaction term did not improve the new model's fit. Results of model's random parameters in Table 5.37 shows that introduction of interaction between costs of doing business and competition reduced the residual variability at level 1 (from 2.05 in the old model to 2.04 in the new model). Overall, assessment of the new model's fit provided mixed findings. In other words, in spite of the significant parameter, it is worth to note that the variance explained by the interaction as well as the lack of improvement in the new model's fit, suggested that the moderating effect may be small.

Insert Table 5.37. about here

Interaction: Costs of doing business x reliance on ethnic financial capital

As another post-hoc analysis, I examined the moderating effect of respondents' reliance on ethnic financial capital on location-specific costs of doing business. I hypothesized that as

reliance on ethnic financial capital increased, the negative relationship between costs of doing business and the likelihood to choose a location became weaker. My logic for this hypothesis is that stronger reliance on ethnic financial capital reduced an entrepreneurs' need to find the lowest cost location for their business. In Table 5.38, the coefficient related to the interaction of reliance on ethnic financial capital and costs of doing business is reported ($b = 0.14$, $p < 0.05$). Based on the results, reliance on ethnic financial capital significantly moderated the negative relationship between costs of doing business and the likelihood to choose a location. That said, the post-hoc hypothesis about the interaction between reliance on ethnic financial capital and costs of doing business was supported.

Insert Table 5.38. about here

To understand the nature of the moderating effect, I graphed it in Figure 5.4. As demonstrated, at low levels of ethnic financial capital (one standard deviation below the mean), the relationship between costs of doing business and the likelihood to choose a location was stronger (e.g., dotted blue line). On the other hand, at high levels of reliance on ethnic financial capital (one standard deviation above the mean), the main effect of costs of doing business on the likelihood to choose a location became weaker (e.g., red line).

Insert Figure 5.4. about here

Model fit: Costs of doing business x reliance on ethnic financial capital

As shown in Table 5.39, (-2LL), AIC, and BIC associated with the new model were smaller than those of the old model. Therefore, the introduction of interaction term improved the new model's fit.

Insert Table 5.39. about here

Furthermore, the new model's Pseudo-R^2 showed that introduction of the interaction term accounted for 0.04% of variability in the likelihood to choose a location. Comparing the values of χ^2_{Change} for (-2LL), AIC, BIC, and Pseudo-R^2 showed that there was not any change in the new model's fit, compared to the old model. In other words, addition of the interaction term did not improve the new model's fit. Results of the model's random parameters in Table 5.40 shows that introduction of interaction between costs of doing business and reliance on ethnic financial capital reduced the residual variability at level 1 (from 2.05 in the old model to 2.04 in the new model). Therefore, results of fit assessment provided mixed findings in terms of improvement of the new model's fit.

Insert Table 5.40. about here

Interaction: Government support x reliance on ethnic financial capital

As a post-hoc analysis, I examined the moderating effect of immigrant entrepreneurs' reliance on ethnic financial capital on their preference for locations associated with high government support. I hypothesized that as reliance on ethnic financial capital increased, the positive relationship between government support and the likelihood to choose a location became weaker. I hypothesized this relationship based on similar logic as the previous post-hoc hypothesis: increased reliance on ethnic financial capital reduces the need of entrepreneurs to select a location where government support is present. In Table 5.41, the coefficient related to the interaction of reliance on ethnic financial capital and government support is reported ($b = -0.13$, $p = 0.05$). Based on the results, reliance on ethnic financial resources significantly moderated the positive relationship between location-specific government support and the likelihood to choose a location. That said, the post-hoc hypothesis about the interaction between government support and reliance on ethnic financial capital was supported.

Insert Table 5.41. about here

As shown in Figure 5.5, at low levels of reliance on ethnic financial capital (one standard deviation below the mean), the relationship between government support and location decision likelihood was stronger (e.g., dotted blue line). In comparison, at high levels of reliance on ethnic financial capital (one standard deviation above the mean), the main effect of government support on location decision likelihood was weaker (e.g., red line).

Insert Figure 5.5. about here

Model fit: Government support x reliance on ethnic financial capital

As shown in Table 5.42, (-2LL), AIC, and BIC associated with the new model were smaller than those of the old model. Therefore, introduction of the interaction improved the new model's fit. Furthermore, Pseudo-R^2 of the new model showed that introduction of the interaction

Insert Table 5.42. about here

Comparing the values of χ^2_{Change} statistics for (-2LL), AIC, BIC, and Pseudo-R^2 with the critical value of the χ^2 statistic for df = 1 (i.e., 3.84, $p < 0.05$) showed that the change in the fit of the new model was non-significant. In other words, addition of the interaction term did not improve the new model's fit. Results of model's random parameters in Table 5.43 shows that the introduction of interaction between government support and reliance on ethnic financial capital reduced the residual variability at level 1 (from 2.05 in the old model to 2.04 in the new model). By and large, the goodness of fit measures provided mixed findings about improvement of the new model's fit. In other words, in spite of the significant parameter, it is worth to note that the variance explained by the interaction (Pseudo-R^2 increase of 0.4%) as well as the non-significant improvement in the new model's fit, suggested that the moderating effect may be small.

Insert Table 5.43. about here

Chapter Summary

In Chapter 5, I discussed the results of my dissertation's data analysis. I started the chapter with statistical power analysis of data. Then, I provided descriptive statistics that was followed by discussion about hypotheses testing. In providing the results of hypothesis testing, I first elaborated on the analysis of main effects and the interaction effects. Then, I discussed the change in model fit, comparing the goodness-of-fit measures of the models that included interaction terms with those that did not. As it can be seen in Table 5.44, all the main effects were supported, but among all the interaction effects, only the moderating effect of human capital on coethnic social capital had a significant effect (but in the opposite direction from my hypothesis). I reported findings of my post-hoc analyses at the end of Chapter 5. I provide summary of findings in Table 5.44, 5.45, 5.46, 5.47, 5.48, and 5.49.

Insert Table 5.44. about here

Insert Table 5.45. about here

Insert Table 5.46. about here

Insert Table 5.47. about here

Insert Table 5.48. about here

Insert Table 5.49. about here

Chapter 6

Discussion and Contributions

Chapter Overview

In Chapter 6, I discuss the contributions and implications of my research on highly-educated immigrant entrepreneurs' start-up location decisions and its implications for theory and practice. First, I provide an overview of my findings and the extent to which they are aligned with the theories used to develop my hypotheses. Second, I discuss in a broader sense how my dissertation contributes to each theory: location theory, ethnic enclave theory, heterolocalism theory and theory of social capital. Third, I discuss how my dissertation model can be extended to other areas of entrepreneurship and strategic management, accompanied with suggestions for future research. Fourth, I elaborate on limitations and also strengths and implications of my dissertation. Finally, I conclude Chapter 6 with stating how I met the research objectives that I outlined in Chapter 1.

Relevance of hypotheses to theories

In the section below, I provide a summary of my findings about foundational theories of my research model on highly-educated immigrant entrepreneurs' location decisions. I discuss the relevance of the results of testing my hypotheses to location theory, ethnic enclave theory, heterolocalism theory, theory of social capital, and boundary conditions of ethnic enclave and heterolocalism theory.

Location theory

Location decisions and costs of doing business

According to location theory (North, 1955), manufacturing companies and MNCs take into account costs of doing business when making location decisions. In the case of

manufacturing companies, the most commonly-studied costs of doing business are transportation costs, tax rates, wage rates, and costs of capital (Charney, 1983; Friedman et al., 1992). For MNCs, not only are these costs considered in making location decisions, other costs including liability of foreignness (Eden & Miller, 2001), psychic costs (Williams & Grégoire, 2015), intellectual property rights, and trade barriers are also examined (Grégoire et al., 2008). Drawing on findings of past research, I studied whether aspiring immigrant entrepreneurs take into account costs of doing business in choosing where to locate their start-ups in the host country. Therefore, in hypothesis 1, I suggested that costs of doing business associated with a location negatively impacted the location decision likelihood. Based on the findings of my dissertation, hypothesis 1 was supported. This implies that predictions of location theory in terms of costs of doing business are applicable to immigrant entrepreneurs' location decisions.

Location decisions and location-specific competition

Porter's generic business-level strategies (Hitt et al., 2013) indicate that co-existence of rival companies at certain locations increases the odds of competition among them. Hence, the more intense the competition, the less likely new entrants are to choose to locate there. This prediction is not consistent with predictions of ethnic enclave theory. Ethnic enclave theory argues that immigrant entrepreneurs are more likely to locate their start-ups in coethnic enclaves (where competition often stems from the start of many similar businesses) because this eases their access to coethnic financial resources (e.g., borrowing money from family and coethnic friends, getting loans from ethnic rotating credit associations, etc.) (Sanders, 2002), information (Johnson-Webb, 2010), ethnic supply chain, etc. (Ebaugh & Curry, 2000). Thus, ethnic enclave theory does not attend enough to the intensity of competition within ethnic enclaves that, according to location theory, is likely to drive immigrant entrepreneurs away from enclaves.

Therefore, in my dissertation I was interested in finding out how aspiring immigrant entrepreneurs marry Porter's predictions about the impact of competition on entering ethnic enclave niches with that of ethnic enclave theory. Therefore, in hypothesis 2, I predicted that location-specific competition negatively impacted immigrant entrepreneurs' likelihood of choosing the location associated with competition with similar businesses. This hypothesis was supported, which implies that predictions of ethnic enclave theory are not comprehensive by excluding competition. In other words, rather than merely focusing on their coethnic social capital, immigrant entrepreneurs are likely to consider factors like intensity of competition in choosing among location alternatives; this factor is silent in ethnic enclave theory.

Location decisions and government support

Footprints of government support initiatives in location theory can be found in past research where it shows that organizations take into account tax rates, and similar government policies, in making location decisions (Devereux, Griffith, & Simpson, 2007; Wheeler & Mody, 1992). Though it seems that immigrants should be giving much importance to location-specific government support, currently, there is not compelling empirical evidence for that. For instance, we do not yet know whether the support (e.g., human resources, resolution of workplace issues, training about laws and regulations, etc.) provided by the U.S. Department of Labor or services provided by Small Business Development Centers (e.g., free business advice and low-cost training services, etc.) incentivize aspiring immigrant entrepreneurs to locate their start-ups in certain locations. Therefore, in hypothesis 3, I examined the positive relationship between location-specific government support offered to immigrant entrepreneurs and their start-up location decisions. Findings of my dissertation supported hypothesis 3. This indicates that in making location decisions, aspiring immigrant entrepreneurs consider government support

initiatives. From a theory perspective, my findings regarding hypothesis 3 contribute to location theory by adding another decision factor, namely government support, beyond tax rates, to the variables that location theory suggests in predicting location decisions of businesses. In addition, my findings acknowledge the application of location theory in immigrant entrepreneurship research, which, as previously noted, location theory has been mostly absent from discussions of immigrant entrepreneurship. From the practice point of view, policy-makers can use immigrant-specific start-up support as a hook to attract immigrant entrepreneurs to certain locations.

Ethnic enclave theory

Location decisions and social capital

According to ethnic enclave theory, immigrant entrepreneurs are likely to locate within their ethnic enclaves where the majority of residents and business owners are from the same ethnicity. Co-locating with a considerable number of coethnic individuals in a foreign country is likely to provide immigrants with access to needed resources for surviving and maintaining their businesses. However, recent evidence demonstrates that emerging waves of highly-educated immigrants increasingly choose to locate outside their historically-known ethnic enclaves (Kaushal & Fix, 2006). This observation is not consistent with ethnic enclave theory's predictions.

In my dissertation, I was interested in testing ethnic enclave's prediction of the pull of coethnic social capital. In other words, I aimed at learning to what extent ethnic enclave theory's predictions about immigrant entrepreneurs' willingness to locate where they have coethnic social capital holds for highly-educated aspiring immigrant entrepreneurs. Therefore, in hypothesis 4a, I stated that immigrant entrepreneurs are more likely to locate their start-ups where they have family members and/or a larger number of coethnic friends. Results obtained from my research

supported hypothesis 4a. This finding is important, considering that the majority of past research (Edin et al., 2003; Carnabuci & Wezel, 2011) takes for granted the assumption that immigrant (entrepreneurs) take into account their coethnic social capital in deciding where to locate; although, there has been limited empirical evidence to explicitly support this assumption.

Heterolocalism theory

Although ethnic enclave theory has been the dominant theoretical lens to predict immigrant (entrepreneurs') strategic decisions and behaviors, its perspective about immigrants' social capital is not comprehensive. In the majority of cases, ethnic enclave theory has a limited view of immigrant entrepreneurs' social capital by giving significant weight to immigrants' coethnic social capital at the cost of neglecting the potential influence of their non-coethnic social capital (Alvarez, 1990; Chin, Yoon, & Smith, 1996; Brenner et al., 2010). It makes sense that immigrants connect better with individuals with whom they share the same ethnicity; however, specifically in the case of highly-educated immigrants who have pursued a university degree in the host country prior to starting their business, it is likely that their social capital expands beyond their coethnic social capital. Therefore, hypotheses 4b predicted that immigrant entrepreneurs' location-specific non-coethnic social capital positively impacted their start-up location decision likelihood. Findings of my dissertation provided support for this hypothesis. My findings suggested that ethnic enclave theory will give more reliable depictions of immigrant entrepreneurs' strategic decisions by including immigrants' non-coethnic social capital, beyond their coethnic social capital. My dissertation results contribute to heterolocalism theory in explaining why immigrant entrepreneurs may choose to locate outside their coethnic enclaves. That is to say, immigrant entrepreneurs are likely to choose non-enclave start-up locations because of their reliance on their location-specific non-coethnic social capital. Another

contribution of my research is the inclusion of non-coethnic social capital beyond coethnic social capital to predict immigrant entrepreneurs' location decisions. This can provide significant insight to future research on immigrant entrepreneurship since there is evidence that immigrants are likely to reap different benefits from their coethnic social capital compared to their non-coethnic social capital (Saxenian, 2002). Along those same lines, future research on immigrant entrepreneurs' social capital can tap into different benefits that immigrants obtain from their coethnic versus non-coethnic social capital.

If we consider that immigrant entrepreneurs develop both coethnic and non-coethnic relationships, then we can theorize about how they maintain balance between the two. Taking into account that immigrant entrepreneurs have a limited amount of time and other resources to spend on network building, it is more likely that they devote different proportions of their time and energy to building their network. In other words, it is likely that when it comes to choosing between their coethnic social capital and their non-coethnic social capital, they choose one over the other. This is similar to substituting one type of social capital with another one. Therefore, in Hypothesis 5, I measured the moderating effect of non-coethnic social capital on coethnic social capital. My research findings show that the moderating effect of non-coethnic social capital on coethnic social capital was non-significant. This implied that possessing non-coethnic friends and acquaintances on whom one can rely, did not impact immigrant entrepreneurs' reliance on their coethnic social capital in making start-up location decisions. My interpretation of this finding coupled with my findings on significant main effects of different types of social capital and location decision likelihood showed that each of coethnic social capital and non-coethnic social capital had independent effects on immigrants' location decision likelihood. That said, they did not strengthen or weaken each other's impact on location decision likelihood, instead

they exerted separate influences on immigrants' start-up location decisions. Based on my findings, for aspiring immigrant entrepreneurs, there was not a trade-off between their coethnic and non-coethnic social capital.

Ethnic enclave theory and heterolocalism theory: Boundary conditions

Location decisions and social identity

Immigrants' (and by extension, immigrant entrepreneurs') identification with their coethnic community in host country is a topic of interest in both ethnic enclave theory and heterolocalism theory. According to ethnic enclave theory, immigrants' identification with their coethnic community motivates them to reside and start their businesses in coethnic enclaves. This contradicts with heterolocalism theory that predicts that even if immigrants still identify with their ethnic community, with the help of technological advancements, they are likely to locate anywhere in host country, yet maintain their bonds with their coethnic community. Therefore, from the heterolocalism perspective, the mere identification with the coethnic community is not a compelling reason for immigrants to choose to locate in their coethnic enclave.

In my dissertation, I was interested in testing whether predictions of ethnic enclave theory or heterolocalism theory hold in regards to immigrants' identification with their coethnic community. Therefore, in hypothesis 6, I suggested that aspiring immigrant entrepreneurs' identification with their ethnic community in a host country strengthened the positive relationship between their reliance on their coethnic social capital and their location decision likelihood. In other words, I expected that respondents' strong identification with their coethnic community, translated into their higher preference for locations with higher coethnic social capital. Surprisingly, my findings did not support hypothesis 6. In other words, respondents'

identification with their ethnic community in the host country did not significantly strengthen or weaken the positive relationship between reliance on coethnic social capital and location decision likelihood. This finding acknowledges predictions of heterolocalism theory in regards to immigrants' identification with their coethnic community, yet their decision to potentially locate in non-enclave locations. Future research can tap into factors beyond technological advancement to explain heterolocalism theory's predictions. In other words, future research might examine the driving factors for immigrant entrepreneurs to locate in non-enclave places even while they still identify with their coethnic community.

Location decisions, coethnic social capital, and human capital

Research on immigrants' acquisition of and access to different resources, including human capital and social capital, is abundant in sociology. This is probably due to the critical nature of resources for immigrants and specifically due to immigrants' limited access to resources compared to that of native-born entrepreneurs. In my dissertation, I examined the interaction between aspiring immigrant entrepreneurs' human capital and their social capital. It is likely that highly-educated immigrant entrepreneurs rely heavily on their human capital for which they usually spend significant amount of time, effort and other costs to develop. Furthermore, compared to social capital that depends on immigrant entrepreneurs' interactions with other individuals, human capital is more readily in control of immigrant entrepreneurs. Put another way, immigrant entrepreneurs can try hard to get into high-quality universities in a host country, can spend numerous hours on gaining knowledge and on learning various skills on their own, however, they may not be as successful in developing their coethnic social capital, especially if they are not exposed to individuals from their ethnicity or country of origin in the

host country. Thus, immigrant entrepreneurs can more effectively manage their human capital, compared to their social capital which requires other individuals' consent and collaboration.

Therefore, hypothesis 7 predicted that immigrants' human capital including their past entrepreneurial experience, paid work experience, and location decision experience weakened (negatively moderated) the relationship between their location-specific coethnic social capital and their location decision likelihood. Findings of my dissertation showed that the moderating effect of entrepreneurial experience on immigrants' coethnic social capital was not significant. In other words, regardless of immigrant entrepreneurs' past entrepreneurial experience, the relationship between their reliance on coethnic social capital and location decision likelihood remained positive and significant. This is not consistent with research that found that immigrant entrepreneurs' reliance on coethnic social capital diminished as their past entrepreneurial experience increased (Marger, 2010). It is also non-consistent with my expectations about substitutability of immigrant entrepreneurs' human capital for their coethnic social capital. This non-finding in my research can possibly be attributable to limited variance in my research respondents' past entrepreneurial experience (Mean = 0.55; SD = 1.58 on a 7-point Likert scale).

In regards to immigrants' past paid work experience, the moderating effect on their coethnic social capital was strongly significant. In other words, for respondents who had prior paid work experience, the relationship between location-specific coethnic social capital and location decision likelihood was stronger; thus, aspiring immigrants who had higher levels of past paid work experience, relied to a larger extent on their coethnic social capital when considering location alternatives. This is both inconsistent with my predictions for hypothesis 7 and inconsistent with findings of past research on immigrants' less reliance on coethnic social capital when they were equipped with high levels of human capital (Yoon, 1991; Sanders, 2002).

One possible explanation for this result is the locus of their paid working experience. If this experience was within the ethnic enclave or with coethnic ties, the relationship between coethnic social capital and location decision likelihood would be enhanced. This would be an interesting area for future research to explore.

The non-significant moderating effect of location decision experience on immigrant entrepreneurs' coethnic social capital was surprising to me. Similar to my reasoning for other measures of human capital, I expected that respondents with more experience in making location decisions to rely less on their coethnic social capital, primarily because they could rely on their past experience to make up for their coethnic social capital. However, my expectation was not met. One possible reason for this surprising finding was that because my research sample comprised of aspiring immigrant entrepreneurs, the majority of them did not have prior experience in making location decisions (mean = 2.82; SD = 1.71 on a 7-point Likert scale), therefore, there was not enough variance in this variable. Although this is seemingly a methodological limitation, it also suggests that the population studied in this dissertation (aspiring immigrant entrepreneurs, especially those in graduate programs) may have limited experience with which to trade-off with their social capital. Another possibility is that immigrants' human capital can only make up for limited resource needs of immigrant entrepreneurs (e.g., knowledge) but cannot completely substitute their social capital and the resources to which immigrant entrepreneurs access through their social capital (e.g., financial resources, etc.).

Location decisions, non-coethnic social capital, and human capital

Because immigrant entrepreneurs' social capital includes both coethnic and non-coethnic social networks, I was interested in studying the moderating effect of their various measures of

human capital on their non-coethnic social capital. Similar to what I explained above, I hypothesized that immigrant entrepreneur's human capital weakened the relationship between their reliance on non-coethnic social capital and their location decision likelihood. I argued that, for highly-educated immigrant entrepreneurs, it is easier to effectively manage their human capital which is self-sustained, compared to their non-coethnic social capital, for instance, in cases where it is hard to develop relationships with non-coethnic individuals because of racial discriminations or negative biases associated with immigrants' country of origin. Therefore, in hypothesis 8, I examined the negative moderating effect of immigrant entrepreneurs' human capital on their non-coethnic social capital. In regards to the moderating impact of immigrants' past entrepreneurial experience, their paid work experience, and location decision experience on their non-coethnic social capital, the relationships were non-significant. In other words, immigrants' past entrepreneurial experience, paid work experience, and location decision experience did not strength or weaken their reliance on their non-coethnic social capital.

Location decisions and reliance on various types of capital

One factor that distinguishes immigrant entrepreneurs from their native counterparts is the means through which they access various resources. For instance, in accessing financial capital, native-born entrepreneurs rely on their personal savings, family wealth, money borrowed from their family and friends, bank loans, etc. (Chandler & Hanks, 1998). Immigrant entrepreneurs' access to financial capital is both similar to and different from native-born entrepreneurs. In regards to similarities, immigrant entrepreneurs can rely on their personal savings, family wealth, money borrowed from their family members and coethnic friends and acquaintances; however, compared to native-born entrepreneurs, their access to bank loans is probably more limited. On the other hand, they can access unique financial resources, such as

ethnic rotating credit associations that give low-interest loans to members of ethnic enclaves (Sanders, 2002).

In hypothesis 9, I stated that immigrant entrepreneurs' reliance on financial capital funded by their coethnic resources (e.g., family, coethnic friends, ethnic rotating credit associations, etc.) strengthened (positively moderated) their reliance on their coethnic social capital when considering start-up location alternatives. My findings showed that the moderating effect of reliance on ethnic financial capital on coethnic social capital was non-significant. This finding indicated that for aspiring immigrant entrepreneurs, reliance on ethnic financial capital did not significantly moderate the relationship between their coethnic social capital and location decision likelihood. This is surprising from a theoretical standpoint; it was reasonable to expect that reliance on ethnic financial capital for aspiring immigrant entrepreneurs strengthened the positive main effect of coethnic social capital on location decision likelihood. Maybe immigrants do not rely on their coethnic social capital to access financial capital, or perhaps second-generation immigrant entrepreneurs differ from first-generation immigrant entrepreneurs in terms of reliance on various sources of ethnic financial capital. There is evidence that immigrant entrepreneurs' reliance on ethnic resources varies from one ethnic group to another (Kim & Hurh, 1985; Raijman & Tienda, 2000). Therefore, it is likely that in my research, one ethnic group's reliance on their ethnic financial capital cancelled out the limited reliance of the other ethnic groups on their ethnic financial resources. Another possibility is that as research participants were aspiring entrepreneurs with varying degrees of future entrepreneurial intention, they did not have a good grasp of available funding opportunities when they were asked to respond to the survey question related to their start-up funding alternatives. Furthermore, I also speculate that because of technological advancements in the financial and banking industries and

due to ease of transferring money in a short time and with a little fee, immigrant entrepreneurs can still rely on their ethnic financial capital without necessarily locating their start-ups where their coethnic social capital physically locates. This speculation is aligned with predictions of heterolocalism theory in regards to technological advancement effects on dispersed location patterns of contemporary immigrants. It is likely that even for highly-educated immigrant entrepreneurs, their human and non-coethnic social capital are two unique resources that each yield unique benefits; thus they are non-substitutable.

Contributions and Implications

Location theory

Use of location theory in immigrant entrepreneurs' socio-spatial research is scarce because the majority of past research has focused on social capital as the primary explanation for why immigrant entrepreneurs choose a certain start-up location. Therefore, my dissertation is one of the few that used location theory to partially explain highly-educated immigrant entrepreneurs' start-up location decisions. Location theory's basic argument is that the explicit costs (e.g., land and labor costs, tax rates, etc.) and implicit costs (e.g., quality of infrastructure, costs associated with psychic distance and cultural differences, etc.) that organizations consider in choosing among location alternatives drive such location decisions. My research contributes to location theory by extending its application beyond that of manufacturing companies and MNCs. In other words, my research findings showed that predictions of location theory are applicable to immigrants and probably also to minorities with intentions to found new businesses in the host country and in both manufacturing and non-manufacturing industries. Another contribution of my research to location theory is the introduction of other factors, beyond those mentioned above, that are likely to implicitly impact costs associated with a specific location. In other

words, immigrant entrepreneurs' reliance on their coethnic and non-coethnic social capital is likely to impact costs of obtaining information and knowledge, recruiting human resources, landing financial capital, etc. for entrepreneurs who intend to choose a location among various location alternatives. In addition, I found in my post-hoc analysis that the relationship between costs of doing business and government support as predictors and location decision likelihood as DV weaken as reliance on ethnic financial capital increases. This also indicates how my research contributes to location theory by introducing its boundary condition with respect to sources of financial capital.

Ethnic enclave theory

Ethnic enclave theory is a lens through which the majority of past research on immigrant entrepreneurship has been conducted. In my dissertation, I used ethnic enclave theory to investigate highly-educated immigrant entrepreneurs' reliance on their coethnic social capital in considering location alternatives. My findings are consistent with ethnic enclave theory's predictions about the importance of coethnic social capital for immigrant entrepreneurs and even for highly-educated immigrant entrepreneurs. However, my research empirical evidence departs from ethnic enclave theory by implying that in making location decisions, immigrant entrepreneurs are likely to consider having reliable family members and coethnic friends and acquaintances in those places, rather than merely focusing on locating within their coethnic enclave.

The second contribution of my research to ethnic enclave theory is that coethnic social capital, the foundation of ethnic enclave theory, is not the only factor to impact immigrant entrepreneurs' start-up location decisions. Beyond social capital, other factors, including location-specific costs of doing business, competition, government support and immigrant

entrepreneurs' non-coethnic social capital also impact highly-educated immigrant entrepreneurs' location decisions (Johnson-Webb, 2010; Carnabuci & Wezel, 2011).

My third contribution is expansion of the construct of immigrant entrepreneurs' social capital to include both coethnic and non-coethnic social capital. My research findings showed that highly-educated immigrant entrepreneurs relied on the support of both their coethnic and non-coethnic social capital in choosing among start-up location alternatives.

Heterolocalism theory

Although ethnic enclave theory has a long-standing history in the study of immigrants and immigrant entrepreneurs, the use of heterolocalism theory is new and emerging. Contrary to ethnic enclave theory, heterolocalism theory predicts that immigrant (entrepreneurs) do not necessarily locate in ethnic enclaves, rather, they are likely to reside in dispersed locations. Heterolocalism theory attributes immigrants' dispersed location patterns to technological advancement and possibility of connecting to coethnic social capital via modern and cost-effective communication and transportation means. My research findings showed that another explanation for immigrant entrepreneurs' dispersed location patterns is likely to be their reliance on non-coethnic social capital. In other words, immigrants may be attracted to non-enclave locations and even locations where they do not have much coethnic social capital because they have non-coethnic social capital on which they can rely.

Theory of social capital

Social capital is the primary theoretical explanation in research on immigrant entrepreneurs' socio-spatial behaviors. Although, social capital's explanations of immigrant entrepreneurs' location decisions are valid; something is missing. Social capital research about immigrant entrepreneurship has mostly adopted a limited view of immigrants' social capital, as if

immigrants rely only on relationships with their family members and only attempt to develop networks with other individuals with whom they have ethnicity or country of origin in common. This is not entirely true about immigrant entrepreneurs, especially highly-educated immigrant entrepreneurs. A large number of highly-educated immigrants pursue a graduate degree in the host country which gives them ample opportunity to develop networks that include both coethnic and non-coethnic individuals. As part of their graduate studies, international graduate students usually participate in academic and practitioner conferences within and outside the host country which provides them with networking opportunities beyond their ethnic enclave. In addition, many universities where international students pursue their graduate degrees have entrepreneurship centers that facilitate students' networking with others (e.g., mentors, investors, other students with similar entrepreneurial ideas, etc.) The evidence showed that considering social capital as a one-dimensional construct is not the best approach. In other words, it is not wise to put all the immigrant entrepreneurs' networks in one box and treat them in a similar way. My research findings indicated that highly-educated immigrant entrepreneurs develop different types of networks including coethnic and non-coethnic ties; each of which are unique in nature and meet immigrant entrepreneurs' different needs. Furthermore, my findings showed that immigrant entrepreneurs' coethnic and non-coethnic social capital are unique and cannot be substituted by each other.

Summary of Implications and Contributions

Below are the main contributions of my research on highly-educated immigrant entrepreneurs' start-up location decisions:

1. Past research on immigrant entrepreneurship, specifically on immigrant entrepreneurs' start-up location decisions is scarce in entrepreneurship and strategic management (Sequeira & Rasheed,

2006); therefore, my research expands our understanding of factors that highly-educated immigrant entrepreneurs consider when deciding where to locate their business. Currently, there is an increasing interest in theory development in minority entrepreneurship research (e.g., immigrant entrepreneurs, etc.); therefore, my research contributes to development of theories that explain various aspects of minority entrepreneurship.

2. Although topics relevant to recent immigrants' influx to developed countries are gaining increasing interest, our understanding of immigrants' socio-spatial behaviors and decision-making are limited. One topic relevant to immigrants that has attracted much attention is destinations that immigrants and refugees choose as their second home in the host country. Taking into account that a lot of immigrants come from countries with a strong entrepreneurial spirit, the likelihood that they start businesses in the host country is high ("Born out of necessity", 2015; Harrison & Kottasova, 2015). On the other hand, policy-makers at national and state levels in developed countries have increasingly become interested in directing immigrants and especially immigrant entrepreneurs to destinations within the host country that are seeking economic development through entrepreneurial activities ("Rolling out the Welcome", 2015). Therefore, my research sheds light onto our understanding of the factors that immigrant entrepreneurs take into account when deciding about their start-up location. That said, my research is a stepping stone in developing our knowledge about factors beyond immigrant entrepreneurs' coethnic social capital, such as location-specific costs of doing business, competition, government support, and non-coethnic social capital that explain highly-educated immigrant entrepreneurs' location decisions.

3. My research contributes to location theory by extending its application to immigrant entrepreneurship research. In addition, my research improves our understanding of the factors

that fit into location theory's category of explicit and implicit location-specific costs; but not vividly mentioned in the theory (e.g., reliance on social capital to reduce location-relevant costs, etc.)

4. Furthermore, in my dissertation, I integrate ethnic enclave (Waldinger, 1993) and heterolocalism theories (Zelinsky & Lee, 1998) with contradicting predictions about immigrants' location patterns to provide a better explanation about immigrant entrepreneurs' location decisions. My research findings acknowledged that immigrants relied on their coethnic social capital (derived from ethnic enclave theory) in choosing among location alternatives; however, for those that rely on their non-coethnic social capital, they are likely to choose non-enclave locations (heterolocalism theory).

5. My research expands our understanding of heterolocalism theory's explanations about dispersed location patterns of immigrants in the host country. According to my research findings, one possible explanation about immigrants' locating in non-enclaves is their reliance on their human capital and their location-specific non-coethnic social capital. In other words, immigrants may choose to locate in non-enclave locations where they have non-coethnic social capital. In addition, it is likely that immigrant entrepreneurs choose to locate in non-enclave locations, relying on their human capital (e.g., "I have past entrepreneurial experience; therefore, I can rely on that in accessing resources rather than relying on my coethnic social capital.")

6. Another contribution of my research is the insight it adds to the construct of social capital in immigrant entrepreneurship research. Although past research shows that immigrant entrepreneurs heavily rely on their coethnic social capital; my research results indicated that immigrant entrepreneurs relied on both their coethnic social capital and non-coethnic social capital. Specifically, highly-educated immigrant entrepreneurs who are more likely to start their

businesses in industries (e.g., high-tech, professional services, etc.) that offer products and services to clientele that is beyond their coethnics (Chrysostome & Lin, 2010).

Extension of Theoretical Model and Future Research

The model that I proposed and tested in my dissertation can be extended to the study of start-up location decisions of other groups of minority entrepreneurs who have historically been bound to locate their start-ups in specific locations. For instance, black entrepreneurs have largely located and have been advised to locate in places including Washington, D.C., Houston, Texas, and Austin, Texas (Wills, 2015) where a comparatively large black population, specifically black entrepreneurs reside. This is probably because co-location with other blacks gives them a higher chance of developing networks with other black individuals (e.g. similar to immigrant entrepreneurs' reliance on coethnic social capital). This is in line with predictions of my theoretical argument about the impact of an individual's coethnic/racial social capital and their location decisions. However, my research model can be applied for instance, to black entrepreneurs who intend to move to locations other than those mentioned above to explore ample business opportunities elsewhere. Based on my research findings, it is likely that black entrepreneurs with higher human capital, can rely less on their location-specific co-racial social capital and target locations where they may find lower costs of doing business and competition and high government support for minority businesses (e.g., U.S. Small Business Administration's 8(a) Business Development Program).

My theoretical model can also be applied to international and transnational entrepreneurs' start-up location decisions. Findings of my dissertation indicated that although these entrepreneurs may not have a rich network of coethnic acquaintances and friends, they may still rely on their human capital and also their non-coethnic social capital. In addition, in making

sound start-up location decisions, my findings encourage us to consider a more comprehensive group of variables including location-specific costs of doing business, competition, and government support opportunities beyond entrepreneurs' social network in examining immigrant entrepreneurs' start-up location decisions.

In regards to future research avenues, a qualitative study of immigrant entrepreneurs who have already started their businesses can be conducted to compare the results of my research on aspiring immigrant entrepreneurs with those that have already realized their entrepreneurial intentions. Furthermore, comparison of factors that influence highly-educated immigrant entrepreneurs' start-up location decisions with those of less-educated immigrant entrepreneurs will extend our knowledge of the extent to which their human capital plays a role. In addition, I suggest that in future research, factors that impact highly-educated immigrant entrepreneurs' location decisions vs. those of native-born entrepreneurs be examined. There is also need for studies to capture other factors that are likely to impact immigrant entrepreneurs' location decisions beyond those that I studied in my dissertation. Beyond immigrant entrepreneurs, future research can address how minority status, human capital, and social capital impact minority entrepreneurs' start-up location decisions. For instance, past research evidence shows that foreign-earned human capital is not highly-valued in the host countries (Sanders & Nee, 1996). Future research can compare the effects of immigrant entrepreneurs' foreign-earned human capital with that earned in the host country on their start-up location decisions.

General Limitations

My dissertation has a few theoretical and methodological limitations and challenges related to non-findings. In regards to the variables that I included in the theoretical model, I limited them to five variables that I found the most relevant after I reviewed the literature on

organizations' and immigrants' location decisions. Methodologically, my research limitations include the use of conjoint analysis and specifically, fractional factorial design, the use of a student sample, and the number of profiles associated with the number of decision attributes involved. Below, I discuss each limitation along with precautions I used to mitigate them.

Theory-driven limitations. The study of immigration in entrepreneurship and strategic management is emerging; therefore, this area does not have a rich research background and literature. This makes the research even more challenging because there is not much research to rely on in specifying relevant variables and theory-driven relationships among them. My review of past research on immigrant entrepreneurs' location decisions in entrepreneurship, strategic management, sociology, and geography led me to choose a series of variables in two categories, namely location-relevant and individual-relevant location decision attributes that are likely to impact aspiring immigrant entrepreneurs' start-up location decision. However, there were several other seemingly relevant variables (e.g., geographic climate, quality of infrastructures, community's openness to immigrants, etc.) that I could include in my study but I did not. To minimize this limitation, my decision about inclusion and exclusion of relevant variables was driven by theory and by past research evidence. To ensure relevance of the study variables, I conducted pre-tests, asking respondent about the importance of study variables. The majority of respondents had consensus about the relevance of variables. Also, I included a few post-experiment questions at the end of the research instrument to measure the extent to which respondents perceived the study variables as important in impacting their start-up location decisions. Findings show that respondents perceived all the five variables as relevant in impacting their start-up location decisions.

Methodological limitations. In my dissertation I used conjoint analysis. Like other experimental methods, it improved internal validity of my research but at the same time posed challenges to its external validity (Green et al., 2001). In my research, it is likely that the experimental design challenges the generalizability of my findings to all immigrants and also to other minority entrepreneurs. To tackle this limitation, I ran a series of pre-tests on the conjoint instrument and post-experiment survey and improved them in terms of the clarity of instructions, the task in hand, etc. before final distribution to research participants. This helped me to ensure that decision profiles closely represented the actual decision situations that aspiring immigrant entrepreneurs are likely to face in real life (Green et al., 2001). Another methodological limitation is the use of a fractional factorial design. Use of this design has less fatiguing effects on respondents; but it requires a large number of research respondents to enable the researcher to draw inferences about higher-order interactions (Aiman-Smith et al., 2002). However, the power analysis that I conducted indicates that I have sufficient power to detect the effects that I predicted.

Along the same lines, another methodological challenge was the use of conjoint design that required respondents to make decisions about hypothetical decision profiles (Green et al., 2001). This coupled with the characteristics of my research participants who mostly lacked actual entrepreneurial experience at the time of the study made the decision task even harder for them. My research sample included first-generation international graduate students at the University of Tennessee, Knoxville with varying degrees of future entrepreneurial intentions. I mitigated this limitation by providing clear instructions about the decision task at the beginning of the survey. In addition, I included a practice decision profile at the beginning of the survey to diminish start-up effects (Aiman-Smith et al., 2002) and to familiarize respondents with the task

at hand. Furthermore, I conducted reliability tests on respondents' ratings of original and repeated location decision profiles, and I removed respondents with unreliable responses from data analysis (Karren et al., 2002). This is all in addition to the pre-tests already described. However, by sampling only individuals from one geographic area, my sample may implicitly restrict the range of variance on key demographic characteristics.

Another limitation was the use of a student sample that usually provokes concerns about a study's findings' generalizability to the population of interest. In response to this concern, I targeted first-generation international graduate students who had all gone through an immigration experience at some point in their lives. In addition, the respondents' pursuit of graduate studies at the University of Tennessee indicated that respondents possessed a high level of education. Furthermore, in order to distinguish between those with entrepreneurial intentions and those without entrepreneurial intentions, I used a screening question at the beginning of the conjoint survey asking respondents on a 7-point scale about the extent to which they had any entrepreneurial intentions post-graduation. Past research shows that intentions are likely to predict behaviors (Ajzen, 2011). Therefore, it is common in entrepreneurship research to set those with and without entrepreneurial intentions apart with screening questions (Hack, Bieberstein, & Kraiczy, 2016; De Carolis, Litzky, & Eddleston, 2009; Davidsson & Honig, 2003). It is worth noting that "52.3 percent of immigrant entrepreneurs came to the Unites States as students, stayed in the United States after graduation and they founded companies an average of thirteen years after their arrival" (Wadhwa, Rissing, Saxenian, & Gereffi, 2007, p. 3). This indicates that the student sample in my dissertation more than approximated the population of highly-educated immigrant entrepreneurs; my student sample accurately reflects a key portion of

this population. As a result, the use of this sample heightens the likelihood of my study's findings' external validity (Aguinis & Bradley, 2014).

Furthermore, I could include other variables in the model, but I did not because there is a positive relationship between the number of decision attributes and the number of decision profiles that respondents should complete. In other words, increasing the number of attributes or the number of levels of an attribute have an exponential effect on the number of additional decision profiles that respondents would have to evaluate. Based on past research findings, respondents are likely to experience boredom and tiredness as the number of decision profiles increases in conjoint studies. This is likely to skew research findings (Aiman-Smith et al., 2002). To diminish this limitation and by doing an extensive review of past research in entrepreneurship, strategic management, sociology and geography, I made sure that my study variables were relevant to immigrant entrepreneurs' start-up location decisions. In addition, pre-tests and post-experiment questions further confirmed the practical relevance of these attributes to respondents.

Limitations regarding non-findings. Although I found support for all hypothesized main effects, I did not find support for the moderating effects, except for the moderating effect of paid work experience on coethnic social capital. Non-significant hypothesized relationships may be attributed to theoretical and methodological limitations. For instance, it is possible that theoretically, the moderating effects do not hold. I attempted to mitigate this possibility by conducting an extensive literature review and including the most relevant variables that were likely to impact highly-educated immigrant entrepreneurs' location decisions. In addition, non-significant findings occur because of limited statistical power and small sample size. I weakened this likelihood by running power analysis to determine the appropriate sample size for my study.

Results of power analysis showed that to obtain the effect size of 0.20 (which is a small effect size) and power of 0.80, proper sample size was about 75-80 respondents. As my dissertation sample size was 79 respondents, there was little concern that sample size influenced the non-significant findings. However, it is likely that my sample size has significantly less power to detect both level 1 direct effects and level 2 by level 1 (cross-level) interactions, specifically because the level 2 variables explain such little overall variance.

General Strengths

My dissertation has two major strengths. The first was its use of theories from across other disciplines. This helped to better understand highly-educated immigrant entrepreneurs' start-up location decisions. The second strength underlined the use of experimental research design for decomposing aspiring immigrant entrepreneurs' real-time location decision policies (Shepherd & Zacharakis, 1999).

Theoretical strengths. In my dissertation, I bring theories from other disciplines, namely economics, sociology and geography to provide a better understanding of start-up location decisions that aspiring highly-educated immigrant entrepreneurs make. The use of location theory (North, 1955) from economics allowed me to include location-specific variables (e.g., costs of doing business, competition, government support) in the study of immigrant entrepreneurs' location decisions. Furthermore, I relied on ethnic enclave theory to elaborate on the impact of immigrant entrepreneurs' coethnic social capital and ethnic financial capital on their start-up location decisions. Third, I used heterolocalism theory to provide a precise depiction of the phenomena of interest by including variables like non-coethnic social capital, identification with ethnic community in the host country, and human capital in the start-up location decision model.

Methodological and research design strengths. In response to criticism posed to entrepreneurship research regarding its limited use of methodologies beyond survey and case studies (Coviello & Jones, 2004), I used conjoint analysis to capture policies that accrue to aspiring immigrant entrepreneurs' start-up location decisions. One advantage of doing so is the minimization of decision-making biases, including self-reporting biases and retrospective biases (Shepherd & Zacharakis, 1999).

Practical Implications

My dissertation not only contributes to theory but also entails practical implications. Below, I discuss practical implications of my research for aspiring highly-educated immigrant entrepreneurs, public policy makers, and those involved in educating immigrant and other minority entrepreneurs.

Implications for immigrant entrepreneurs. Although findings of past entrepreneurship research address important questions regarding entrepreneurs' short and long-term start-up decisions, including their formation of social capital, funding opportunities, succession planning, etc., quite surprisingly, the existing research evidence is limited in regards to one of the first strategic decisions that any aspiring entrepreneur is supposed to make, "where to locate my start-up".

Limited research on native-born entrepreneurs' start-up location decisions is to some extent understandable as these entrepreneurs are more likely to be socially embedded where they were born and raised; hence are more inclined to found their start-ups in locations close to their family members and friends. However, this is not the case for immigrant entrepreneurs. Immigrant entrepreneurs, specifically the first-generations who were not born and raised in the U.S., are likely to find it challenging to make informed start-up location decisions due to their limited familiarity with the host country. Other factors such as diversity of cultures, state laws,

geographic features, etc. in the U.S. make location decisions even harder for immigrants. Therefore, my dissertation findings help aspiring highly-educated immigrant entrepreneurs to make more informed start-up location decisions. This specifically involves broadening their perspective about what factors to include in their location decision-making process. In the long run, we may be able to observe a positive change in start-up survival rates of immigrant-owned businesses, which is currently 5 percent for those immigrants who have had their start-ups for at least three years (Clark, 2013).

Implications for policy. Fifty-one percent of large start-ups (in terms of financial value) have been founded by immigrants (Koh, 2016); therefore, at international, national and state levels in developed countries, policy-makers are demonstrating increasing interest in attracting immigrant entrepreneurs to certain locations (e.g., Dayton, Nashville, Chicago, etc.) (McDaniel, 2016). The current influx of immigrants and refugees from nations in crisis to developed countries exacerbates the interest in and need for encouraging more immigrants to pursue entrepreneurial careers in new destinations. My dissertation provides insights to policy-makers who encourage immigrants and refugees' pursuit of entrepreneurial careers in new destinations. One takeaway of my research for policy-makers is the provision of government support, including free consultation services, entrepreneurship training courses, etc. to aspiring immigrant entrepreneurs.

Government-funded agencies, such as the Small Business Administration, have been providing support for many years to socially and economically disadvantaged entrepreneurs; though, an eligibility requirement for receiving the support is being a U.S. Citizen which excludes a large number of non-citizen immigrant entrepreneurs (Minority-Owned Business, 2016). Quite recently and at a smaller scale, cities like Nashville have launched programs to facilitate immigrants' transition to mainstream communities and to support immigrants with

entrepreneurial ideas (McDaniel, 2016). Furthermore, as the importance of both coethnic and non-coethnic social capital for immigrant entrepreneurs were confirmed in my dissertation, governments can facilitate immigrants' networking with other immigrants and the native-born citizens at the community-level through organizing networking social events and also through linking and matching aspiring immigrant entrepreneurs with coethnic and non-coethnic mentors. Findings of my post-hoc analysis shows that reliance on ethnic financial capital moderates the main effect of government support on location decision likelihood; therefore, I suggest that in areas where governments have difficulty due to budget limitations, etc. with supporting immigrant entrepreneurs, they can still attract immigrant entrepreneurs by systematically bridging the structural holes between immigrants who may not know each other. In other words, government support agencies can help to bring together community members and entrepreneurs that might otherwise not know each other.

Implications for education. My research findings can be used in development of formal education programs for entrepreneurs, specifically for aspiring immigrant entrepreneurs and refugees who are probably more flexible in selecting their start-up location, compared to native-born entrepreneurs. Entrepreneurship education programs can be geared towards educating immigrant entrepreneurs about adopting a broad mindset in choosing their start-up location. Many aspiring immigrant entrepreneurs may fall in the safety net of locating in their coethnic enclaves, just because their coethnic friends and acquaintance reside there; however, educating aspiring immigrant entrepreneurs about potential opportunities in other locations can play an important role in helping them make more informed decisions.

Furthermore, educational programs in entrepreneurship can include modules with the aim of helping immigrant entrepreneurs make informed location decisions by taking into account the

important location-specific and individual variables that impact their start-up survival and success.

Conclusions

In Chapter 1, I identified four research objectives based on the existing gaps in research on immigrant entrepreneurship, location decisions, entrepreneurship, and strategic management. In concluding my dissertation, I review these research objectives and explicate how I achieved each of them.

- Objective 1: *To provide a better understanding of factors that highly-educated immigrant entrepreneurs consider in start-up location decisions;*

One of the primary strategic decisions that every aspiring immigrant entrepreneur makes is to choose where to locate their start-up. Findings of my research shows that highly-educated aspiring immigrant entrepreneurs consider location-relevant variables, including costs of doing business, intensity of competition, and government support as important in making start-up location decisions. Furthermore, their social capital, namely both coethnic and non-coethnic social capital plays an important role in immigrants' start-up location decisions. The moderating effect of non-coethnic social capital on coethnic social capital was not supported by my research. In addition, I did not find solid support for the moderating impact of immigrants' identification with their ethnic community on their coethnic social capital. In the same vein, the moderating impact of reliance on ethnic financial capital was not supported by my findings. However, the moderating impact of immigrants' human capital on their coethnic social capital was partially supported. I did not find support for the moderating impact of immigrant entrepreneurs' human capital on non-coethnic social capital.

- Objective 2: *To synthesize and integrate two competing theories that are applied to immigrant entrepreneurs' location decisions, namely ethnic enclave theory and the heterolocalism theory and to reconcile them with location theory to draw a more comprehensive picture of immigrant entrepreneurs' location decisions;*

In developing the first three hypotheses about the main effects of costs of doing business, competition, and government support on likelihood of location decision (hypothesis 1-3), I drew from location theory. All these three hypotheses were supported. This indicates that my research findings are consistent with predictions of location theory. In developing main effect of coethnic social capital on likelihood of location decision (hypothesis 4a), I used ethnic enclave theory. As this hypothesis received support, I can consider it to be aligned with ethnic enclave theory. I used heterolocalism theory to form the hypothesis about the main effect of non-coethnic social capital on likelihood of location decision (hypothesis 4b). This hypothesis was also supported. Therefore, it is possible to explain the emerging dispersed location patterns of more recent waves of immigrant entrepreneurs by relying on immigrant's reliance on their non-coethnic social capital. Furthermore, I used ethnic enclave theory to form the hypothesis about the moderating impact of identification with coethnic community (hypothesis 5) and reliance on ethnic financial capital (Hypothesis 6). None of these hypotheses were supported by my findings. Methodological limitations do not allow me to attribute lack of support for these hypotheses to theory's lack of relevance and robustness. I developed the hypothesis in regards to the moderating effect of human capital on coethnic social capital (hypothesis 7) to contribute to our understanding of heterolocalism theory's boundary conditions. Findings of my research indicated that human capital can be considered as a boundary condition in heterolocalism theory to explain why highly-educated immigrant entrepreneurs are likely to locate their start-ups outside ethnic

enclaves. In other words, highly-educated immigrant entrepreneurs with higher levels of human capital seem to be less reliant on their coethnic social capital. I suggest future research to investigate other measures of human capital to see which of them have a moderating effect on immigrants' coethnic social capital.

- *Objective 3: To understand the role of both individual-relevant and location-relevant factors in shaping immigrant entrepreneurs' location decisions.*

In achieving this objective, I included both location-relevant factors, such as costs of doing business, intensity of competition, and government support and also individual-relevant variables including immigrant entrepreneurs' coethnic and non-coethnic social capital, their identification with their ethnic community, human capital and reliance on ethnic financial capital.

Chapter Summary

Chapter 6 concludes this dissertation by providing an overview of my research on highly-educated aspiring immigrant entrepreneurs' start-up location decisions. I started the chapter with a discussion about relevance of research hypotheses and theories used. Next, I discussed the extension of my research model and the avenues for future research. Furthermore, I elaborated on my dissertation's theoretical and methodological limitations. The discussion of the general strengths and practical implications of my research came next. I concluded Chapter 6 with a discussion about how I met the research objectives that I had introduced in Chapter 1.

References

Aguinis, H., & Bradley, K. J. 2014. Best practice recommendations for designing and implementing experimental vignette methodology studies. *Organizational Research Methods, 17*(4): 351-371.

Ajzen, I. 2011. The theory of planned behavior: Reactions and reflections. *Psychology & Health, 26*(9): 1113-1127.

Aiman-Smith, L., Scullen, S. E., & Barr, S. H. 2002. Conducting studies of decision making in organizational contexts: A tutorial for policy-capturing and other regression-based techniques. *Organizational Research Methods, 5*(4): 388-414.

Alba, R., & Nee, V. 1997. Rethinking assimilation theory for a new era of immigration. *International Immigration Review, 31*(4): 826-874.

Alvarez, R. M. 1990. Mexican entrepreneurs and markets in the city of Los Angeles: A case of an immigrant enclave. *Urban Anthropology and Studies of Cultural Systems and World Economic Development, 19*(1/2): 99-124.

Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of Management, 17*(1): 99-120.

Bartel, A. P. 1989. Where do the new US immigrants live?. *Journal of Labor Economics, 7*(4): 371-391.

Bartik, T. J. 1988. The effects of environmental regulation on business location in the United States. *Growth and Change, 19*(3): 22-44.

Bates, T. 1994. Social resources generated by group support networks may not be beneficial to Asian immigrant-owned small businesses. *Social Forces,* 72(3): 671-689.

Benito, G. R., & Gripsrud, G. 1992. The expansion of foreign direct investments: Discrete rational location choices or a cultural learning process?. *Journal of International Business Studies, 23*(3): 461-476.

Bergman, E. M., Feser, E. J. 2000. National industry cluster templates: A framework for applied regional cluster analysis. *Regional Studies, 34*(1): 1-19.

Blair, J. P., & Premus, R. 1987. Major factors in industrial location: A review. *Economic Development Quarterly, 1*(1): 72-85.

Bonacich, E. 1973. A theory of middleman minorities. *American Sociological Review, 38*(5): 583-594.

Born out of necessity: The role of refugee entrepreneurs. (2015. November 16). Retrieved from http://www.apastyle.org/learn/faqs/web-page-no-author.aspx

Brenner, G. A., Menzies, T.V., Dionne, L., & Filion, L.J. 2010. How location and ethnicity affect ethnic entrepreneurs in three Canadian cities. *Thunderbird International Business Review*, *52*(2): 153-171.

Breton, R. 1964. Institutional completeness of ethnic communities and the personal relations of immigrants. *American Journal of Sociology*, *70*(2): 193-205.

Brush, C. G., Manolova, T. S., & Edelman, L. F. 2008. Properties of emerging organizations: An empirical test. *Journal of Business Venturing*, *23*(5): 547-566.

Buckley, P. J., Devinney, T. M., & Louviere, J. J. 2007. Do managers behave the way theory suggests? A choice-theoretic examination of foreign direct investment location decision-making. *Journal of International Business Studies*, *38*(7): 1069-1094.

Bull, I., & Winter, F. 1991. Community differences in business births and business growths. *Journal of Business Venturing*, *6*(1): 29-43.

Burt, R. S. 2001. Structural holes versus network closure as social capital. In N. Lin, K. Cook, & R.S. B. (Eds.), *Social Capital:Theory and Research* (pp. 31-56). New Brunswick, New Jersey: Transaction Publishers.

Bushi, M. 2014. Rethinking heterolocalism: The case of place-making among Albanian-Americans. *Geography Honors Projects.* Retrieved from: http://digitalcommons.macalester.edu/geography_honors/40.

Carlton, D. W. 1983. The location and employment choices of new firms: An econometric model with discrete and continuous endogenous variables. *The Review of Economics and Statistics*: 440-449.

Carnabuci, G., & Wezel, F. C. 2011. Back to the future: Career transitions at the dawn of capitalism: The immigration of merchants from the Southern Netherlands to Amsterdam, 1578–1602. *Organization Studies*, *32*(12): 1621-1637.

Chaganti, R. & Greene, P.G. 2002. Who are ethnic entrepreneurs? A study of entrepreneursapos, ethnic involvement and business characteristics. *Journal of Small Business Management*, *40*(2):126-143.

Chaganti, R. R. S., Watts, A. D., Chaganti, R., & Zimmerman-Treichel, M. 2008. Ethnic-immigrants in founding teams: Effects on prospector strategy and performance in new Internet ventures. *Journal of Business Venturing*, *23*(1): 113-139.

Chandler, G. N., & Hanks, S. H. 1998. An examination of the substitutability of founders human and financial capital in emerging business ventures. *Journal of Business Venturing*, *13*(5): 353-369.

Chang, E. P., Memili, E., Chrisman, J. J., Kellermanns, F. W., & Chua, J. H. 2009. Family social

capital, venture preparedness, and start-up decisions: A study of Hispanic entrepreneurs in New England. *Family Business Review*, *22*(3): 279-292.

Charney, A. H. 1983. Intraurban manufacturing location decisions and local tax differentials. *Journal of Urban Economics*, *14*(2): 184-205.

Chen, M. X., & Moore, M. O. 2010. Location decision of heterogeneous multinational firms. *Journal of International Economics*, *80*(2): 188-199.

Chow, I. H. S., & Ng, I. 2004. The characteristics of Chinese personal ties (guanxi): Evidence from Hong Kong. *Organization Studies*, *25*(7): 1075-1093.

Chrysostome, E. & Lin, X. 2010. Immigrant entrepreneurship: Scrutinizing a promising type of business venture. *Thunderbird International Business Review*, 52(2): 77-82.

Clark, P. (2013, June 24). Tracking success among immigrant entrepreneurs. *Bloomberg*. Retrieved from: http://www.bloomberg.com/news/articles/2013-06-24/tracking-success-among-immigrant-entrepreneurs

Crook, T. R., Todd, S. Y., Combs, J. G., Woehr, D. J., & Ketchen Jr, D. J. 2011. Does human capital matter? A meta-analysis of the relationship between human capital and firm performance. *Journal of Applied Psychology*, *96*(3): 443-456.

Croziers, R. & Ranyard, R. 1997. Cognitive process Models and explanations of decision-making. In Ranyard, R., Crozier, W. R., & Svenson, O. (Eds.). (1997). *Decision Making: Cognitive Models and Explanations* (Vol. 1). Psychology Press.

Curci, R. & Mackoy, R. 2010. Immigrant business enterprises: A classification framework conceptualization and test. *Thunderbird International Business Review, 52*(2): 107-121.

Dahl, M. S., & Sorenson, O. 2007. Home sweet home: Social capital and location choice. *Social Science, Working Paper*: 1-22.

Dallalfar, A. 1994. Iranian women as immigrant entrepreneurs. *Gender & Society*, *8*(4): 541-561.

Davidsson, P., & Honig, B. 2003. The role of social and human capital among aspiring entrepreneurs. *Journal of Business Venturing*, *18*(3): 301-331.

De Carolis, D. M., Litzky, B. E., & Eddleston, K. A. 2009. Why networks enhance the progress of new venture creation: The influence of social capital and cognition. *Entrepreneurship Theory and Practice*, *33*(2): 527-545.

Defever, F. 2006. Functional fragmentation and the location of multinational firms in the enlarged Europe. *Regional Science and Urban Economics*, *36*(5): 658-677.

Degraff, J. (2015, February 26). New immigrants are crucial to Michigan's future. *Michigan Radio*. Retrieved from: http://michiganradio.org.

Demerouti, E., & Rispens, S. 2014. Improving the image of student-recruited samples: A commentary. *Journal of Occupational and Organizational Psychology*, *87*(1): 34-41.

Devereux, M. P., Griffith, R., & Simpson, H. 2007. Firm location decisions, regional grants and agglomeration externalities. *Journal of Public Economics*, *91*(3): 413-435.

Dickens, W., & Lang, K. 1985. A test of dual labor market theory. *American Economic Review*, 75 (4): 792-805.

Dunning, J. H. 1998. Location and the multinational enterprise: A neglected factor?. *Journal of International Business Studies, 29* (1): 45-66.

Ebaugh, H. R., & Curry, M. 2000. Fictive kin as social capital in new immigrant communities. *Sociological Perspectives*, *43*(2): 189-209.

Edin, P.A., Fredriksson, P., & Aslund, O. 2003. Ethnic enclaves and the economic success of immigrants: Evidence from a natural experiment. *The Quarterly Journal of Economics*, *118*(1): 329-357.

Eden, L., & Miller, S. 2001. Opening the black box: Multinationals and the costs of doing business abroad. *Academy of Management Proceedings*, *2001*(1): C1-C6.

Esses, V. M., Dovidio, J. F., Jackson, L. M., & Armstrong, T. L. 2001. The immigration dilemma: The role of perceived group competition, ethnic prejudice, and national identity. *Journal of Social Issues*, *57*(3): 389-412.

Fairchild, G. B. 2010. Intergenerational ethnic enclave influences on the likelihood of being self-employed. *Journal of Business Venturing*, *25*(3): 290-304.

Field, A. 2013. Discovering statistics using IBM SPSS statistics. Sage.

Fischhoff, B. 1988. *Judgment and Decision Making*. Routledge.

Fiske, S.T. 1998. Stereotyping, prejudice, and discrimination. In D.T.Gilbert, S.T. Fiske, & G. Lindzey (Eds.), *Handbook of Social Psychology* (4th ed., Vol. 2, pp. 357–411). New York: McGrawHill.

Fiske, S. T., & Macrae, C. N. (Eds.). 2012. *The SAGE Handbook of Social Cognition*. SAGE Publication.

Flores, R. G., & Aguilera, R. V. 2007. Globalization and location choice: An analysis of US multinational firms in 1980 and 2000. *Journal of International Business Studies*, *38*(7): 1187-1210.

Folta, T. B., Cooper, A.C., Baik, Y.S. 2006. Geographic cluster size and firm performance. *Journal of Business Venturing*, *21*(2): 217-242.

Fong, E., Anderson, E.E., Chen, W., Luk, C. 2008. The logic of ethnic business distribution in Multiethnic cities. *Urban Affairs Review***,** *43*(4): 497-519.

Fong, E., Chen, W., Luk, C. 2012. A study of locational distribution of small and large ethnic Businesses in a multiethnic city: Chinese in Toronto, Canada. *Journal of Small Business Management*, *50*(4): 678-698.

Friedman, J., Gerlowski, D. A., & Silberman, J. 1992. What attracts foreign multinational corporations? Evidence from branch plant location in the United States. *Journal of Regional science*, *32*(4): 403-418.

Gilbert, B. A., McDougall, P. P., Audretsch, D. B. 2008. Clusters, knowledge spillovers and new venture performance: An empirical examination. *Journal of Business Venturing*, *23*(4): 405-422.

Green, P. E., Krieger, A. M., & Wind, Y. 2001. Thirty years of conjoint analysis: Reflections and prospects. *Interfaces*, *31*(3): S56-S73.

Grégoire, D. A., Williams, D. W., & Oviatt, B. M. 2008. Early internationalization decisions for new ventures: What matters?. *Frontiers of Entrepreneurship Research*, *28*(18): 1-14.

Greve, A., & Salaff, J. W. 2003. Social networks and entrepreneurship. *Entrepreneurship Theory and Practice*, *28*(1): 1-22.

Hamilton, R., Dana, L. P., & Benfell, C. 2008. Changing cultures: An international study of migrant entrepreneurs. *Journal of Enterprising Culture*, *16*(1): 89-105.

Hansen, H., Rand, J., & Tarp, F. 2009. Enterprise growth and survival in Vietnam: Does government support matter?. *The Journal of Development Studies*, *45*(7): 1048-1069.

Hardwick, S. W. 2006. Nodal heterolocalism and transnationalism at the United States-Canadian border.*Geographical Review*, *96*(2): 212-228.

Hardwick, S. W. & Meacham, J.E. 2005. Heterolocalism, networks of ethnicity, and refugee communities in the Pacific Northwest: The Portland story. *The Professional Geographer*, *57*(4): 539-557.

Harte, J.M., Koele, P. 1997. Psychometric and methodological aspects of process tracing research. In R. Ranyard, W.R. Crozier & O. Svenson (Eds.). *Decision Making: Cognitive Models and Explanations* (Vol. 1). Psychology Press.

Haynie, J. M., Shepherd, D. A., & McMullen, J. S. 2009. An opportunity for me? The role of resources in opportunity evaluation decisions. *Journal of Management Studies*, *46*(3):

337-361.

Henisz, W. J. Delios, A. 2001. Uncertainty, imitation, and plant location: Japanese multinational corporations, 1990-1996. *Administrative Science Quarterly*, *46*(3): 443-475.

Hernandez, E. 2014. Finding a home away from home effects of immigrants on firms' foreign location choice and performance. *Administrative Science Quarterly*, *59*(1): 73-108.

Herron, L., Sapienza, H. J., & Smith-Cook, D. 1991. Entrepreneurship theory from an interdisciplinary perspective: Volume I. *Entrepreneurship Theory and Practice*, *16*(2): 7-12.

U.S. Immigration Before 1965.(2009). Retrieved from: http://www.history.com/topics/u-s-immigration-before-1965.

Harrison, V., Kottasova, I. (2015, September 10). Today's refugee could be tomorrow's entrepreneur. Retrieved from http://money.cnn.com/2015/09/10/news/migrant-crisis-refugees- business/

Hitt, M., Ireland, R. D., & Hoskisson, R. 2012. *Strategic Management: Competitiveness and Globalization*. Cengage Learning.

Hoogstra, G. J., & Van Dijk, J. 2004. Explaining firm employment growth: Does location matter?. *Small Business Eeconomics*, *22*(3-4): 179-192.

Hunt, J. 2010. Which immigrants are more innovative and entrepreneurial? Distinctions by entry visa. Discussion Paper Series, *Institute for the Study of Labor*: 1-58.

Ibarra, H. 1992. Homophily and differential returns: Sex differences in network structure and access in an advertising firm. *Administrative Science Quarterly*, *73*(3): 422-447.

Jaeger, D. A. 2000. Local labor markets, admission categories, and immigrant location choice. *College of William and Mary*. Retrieved from: http://www.iza.org/conference_files/amm_2004/jaeger_d138.pdf.

Johnson–Webb, K. D. 2002. Employer recruitment and Hispanic labor migration: North Carolina urban areas at the end of the millennium. *The Professional Geographer*, *54*(3): 406-421.

Jones, R., Suoranta, M., & Rowley, J. 2013. Strategic network marketing in technology SMEs. *Journal of Marketing Management*, *29*(5-6): 671-697.

Kalnins, A. & Chung, W. 2006. Social capital, geography, and survival: Gujarati immigrant entrepreneurs in the US lodging industry. *Management Science*, *52*(2): 233-247.

Karren, R. J., & Barringer, M. W. 2002. A review and analysis of the policy-capturing methodology in organizational research: Guidelines for research and practice. *Organizational Research Methods, 5*(4): 337-361.

Kaushal, N., & Fix, M. 2006. The contributions of high-skilled immigrants. *Migration Policy Institute, 16*: 1-19.

Kim, K. C. & Hurh, W.M. 1985. Ethnic resources utilization of Korean immigrant entrepreneurs in the Chicago minority area. *International Migration Review, 19*(1): 82-111.

Kimber, L. 2010. New immigrant settlement patterns in Syracuse, NY: An assessment of the model of heterolocalism. *Upstate Institute Student Research.* Paper 7. Retrieved from: http://commons.colgate.edu/upstate_student/7.

Kimelberg, S. M. & Williams, E. 2013. Evaluating the importance of business location factors: The influence of facility type. *Growth and Change***,** 44(1): 92-117.

Kloosterman, R., Van der Leun, J., & Rath, J. 1999. Mixed embeddedness: (In) formal economic activities and immigrant businesses in the Netherlands. *International Journal of Urban and Regional Research*, *23*(2): 252-266.

Koh. Y. (2016, March 17). Immigrants drive tech startups. Study says. The Wall Street Journal. Retreievd from http://www.wsj.com

Kolveried, L. 1996. Organizational employment versus self-employment: Reasons for career choice intentions. *Entrepreneurship Theory and Practice*, *20*(3): 23-31.

Kolvereid, L., & Isaksen, E. 2006. New business start-up and subsequent entry into self-employment. *Journal of Business Venturing*, *21*(6): 866-885.

Kolympiris, C., Kaloitzandonakes, N., Miller, D. 2014. Location choice of academic entrepreneurs: Evidence from the US biotechnology industry. *Journal of Business Venturing*, *30*(2): 227-254.

Kravis, I. B., & Lipsey, R. E. 1982. The location of overseas production and production for export by US multinational firms. *Journal of International Economics*, *12*(3): 201-223.

Kulchina, E. 2015. A path to value creation for foreign entrepreneurs.*Strategic Management Journal*. Forthcoming.

Kulchina, E. 2014. Media coverage and location choice. *Strategic Management Journal, 35*(4): 596-605.

Lafuente, E., Vaillant, Y., & Serarols, C. 2010. Location decisions of knowledge-based entrepreneurs: Why some Catalan KISAs choose to be rural?. *Technovation*, *30*(11): 590-600.

Lee, L., Wong, P. K., Der Foo, M., & Leung, A. 2011. Entrepreneurial intentions: The influence of organizational and individual factors. *Journal of Business Venturing*, *26*(1): 124-136.

Lepak, D. P., & Snell, S. A. 1999. The human resource architecture: Toward a theory of capital allocation and development. *Academy of Management Review*, *24*(1): 31-48.

Lezner, R. (2013, April 25). Forty percent of the largest U.S. companies founded by immigrants or their children. Retrieved from: http://www.forbes.com/sites/robertlenzner/2013/04/25/40-largest-u-s-companies-founded-by-immigrants-or-their-children/#79bf7f3d6fb3.

Liao, J., & Welsch, H. 2005. Roles of social capital in venture creation: Key dimensions and research implications. *Journal of Small Business Management*, *43*(4): 345-362.

Light, I., Sabagh, G., Bozorgmehr, M., & Der-Martirosian, C. 1994. Beyond the ethnic enclave economy. *Social Problems*, *41*(1): 65-80.

Lohrke, F. T., Holloway, B. B., & Woolley, T. W. 2010. Conjoint analysis in entrepreneurship research: A review and research agenda. *Organizational Research Methods*, *13*(1): 16-30.

Louviere, J. J., Hensher, D. A., & Swait, J. D. 2000. *Stated Choice Methods: Analysis and Applications*. Cambridge University Press.

Love, L. L., & Crompton, J. L. 1999. The role of quality of life in business (re) location decisions. *Journal of Business Research*, *44*(3): 211-222.

Mai, C. C., & Peng, S. K. 1999. Cooperation vs. competition in a spatial model. *Regional Science and Urban Economics*, *29*(4): 463-472.

Marger, M. N. 2001. The use of social and human capital among Canadian business immigrants. *Journal of Ethnic and Migration Studies*, *27*(3): 439-453.

Marshall, A. 1925. *Principles of Economics*. 8th Edition, London: Macmillan.

Massey, D. S., & Mullan, B. P. 1984. Processes of Hispanic and black spatial assimilation. *American Journal of Sociology*, *89*(4): 836-873.

Mathias, B. D., & Williams, D. W. 2014. The impact of role identities on entrepreneurs' evaluation and selection of opportunities. *Journal of Management*, Forthcoming.

Mathieu, J. E., Aguinis, H., Culpepper, S. A., & Chen. G. 2012. Understanding and estimating the power to detect cross-level interaction effects in multilevel modeling. *Journal of Applied Psychology*, 97:951-966.

McDaniel, P. (2016, February). Entrepreneurship and innovation in welcoming cities: Lessons from Chicago, Dayton, and Nashville. Retrieved from http://www.immigrationpolicy.org/special-reports/entrepreneurship-and-innovation-welcoming-cities-lessons-chicago-dayton-and-nashvill.

McDaniel, P. N. & Drever, A.I. 2009. Ethnic enclave or international corridor?: Immigrant businesses in a New South City. *Southeastern Geographer*, *49*(1): 3-23.

McPherson, M., Smith-Lovin, L., & Cook, J. M. 2001. Birds of a feather: Homophily in social networks. *Annual Review of Sociology*, *27*: 415-444.

Minority-Owned Businesses. Access date: 2016, April 3, Retrieved from https://www.sba.gov/starting-business/how-start-business/business-types/minority-owned-businesses.

Nasri, G. (2013, August 14). The shocking stats about who's really starting companies in America. Retrieved from: http://www.fastcompany.com/3015616/the-shocking-stats-about-whos-really-starting-companies-in-america.

Ndofor, H. A. & Priem, R.L. 2011. Immigrant entrepreneurs, the ethnic enclave strategy, and venture performance. *Journal of Management*, *37*(3): 790-818.

NIST/SEMATECH e-Handbook of Statistical Methods. (2012, April). Retrieved from: http://www.itl.nist.gov/div898/handbook.

North, D. C. 1955. Location theory and regional economic growth. *The Journal of Political Economy*, *63*(3): 243-258.

Pe'er, A., & Keil, T. 2013. Are all startups affected similarly by clusters? Agglomeration, competition, firm heterogeneity, and survival. *Journal of Business Venturing*, *28*(3): 354-372.

Pessar, P. R. 1995. The elusive enclave: Ethnicity, class, and nationality among Latino entrepreneurs in greater Washington, DC. *Human Organization*, *54*(4): 383-392.

Peterson, M. F. & Roquebert, J. 1993. Success patterns of Cuban-American enterprises: implications for entrepreneurial communities. *Human Relations*, *46*(8): 921-937.

Phinney, J. S. 1992. The multi-group ethnic identity measure a new scale for use with diverse groups. *Journal of Adolescent Research*, *7*(2): 156-176.

Phinney, J. S., Horenczyk, G., Liebkind, K., & Vedder, P. 2001. Ethnic identity, immigration, and well-being: An interactional perspective. *Journal of Social Issues*, *57*(3): 493-510.

Phinney, J. S., Romero, I., Nava, M., & Huang, D. 2001. The role of language, parents, and peers in ethnic identity among adolescents in immigrant families. *Journal of Youth and Adolescence*, *30*(2): 135-153.

Pioch, E., & Byrom, J. 2004. Small independent retail firms and locational decision-making: Outdoor leisure retailing by the crags. *Journal of Small Business and Enterprise Development, 11*(2): 222-232.

Porter, M. E. 1990. *Competitive Advantage of Nations: Creating and Sustaining Superior Performance*. NY: Simon and Schuster.

Portes, A. 1987. The social origins of the Cuban enclave economy of Miami. *Sociological Perspectives*, *30*(4): 340-372.

Portes, A. 1981. Modes of strcutural incorporation and present theories of labor imigration. In M. M. Kritz , C. B. Keely, & S.M.Tomasi. Global Trends in Migration: Theory and Research on International Population Movements, USA: Jerome S. Ozer Pub.

Portes, A., & Böröcz, J. 1989. Contemporary immigration: Theoretical perspectives on its determinants and modes of incorporation. *International Migration Review*, *23*(3): 606-630.

Portes, A. & Jensen, L. 1989. The enclave and the entrants: Patterns of ethnic enterprise in Miami before and after Mariel. *American Sociological Review*, *54*(6): 929-949.

Portes, A. & Sensenbrenner, J.1993. Embeddedness and immigration: Notes on the social determinants of economic action. *American Journal of Sociology*, *98*(6): 1320-1350.

Prashantham, S., Dhanaraj, C., & Kumar, K. 2015. Ties that bind: Ethnic ties and new venture internationalization. *Long Range Planning*. Forthcoming.

Priem, R. L., & Harrison, D. A. 1994. Exploring strategic judgment: Methods for testing the assumptions of prescriptive contingency theories. *Strategic Management Journal*, *15*(4): 311-324.

Raijman, R. & Tienda, M. 2003. Ethnic foundations of economic transactions: Mexican and Korean immigrant entrepreneurs in Chicago. *Ethnic & Racial Studies*, 26(5): 783-801.

Rauch, A., Doorn, R., & Hulsink, W. 2014. A qualitative approach to evidence-based entrepreneurship: Theoretical considerations and an example involving business clusters. *Entrepreneurship Theory and Practice*, *38*(2): 333-368.

Razin, E. & Light, I. 1998. Ethnic entrepreneurs in America's largest metropolitan areas. *Urban Affairs Review*, *33*(3): 332-360.

Rolling out the welcome mat. (2015, February 7). Retrieved from: http://www.economist.com/news/special-report/21693405-secure-growth-it-needs-indonesia-must-resist-its-protectionist-urges-roll-out.

Rosenthal, S. S., & Strange, W. C. 2008. The attenuation of human capital spillovers. *Journal of Urban Economics, 64*(2): 373-389.

Pfeffer, J. & Salancik, G. R. 2003. *The External Control of Organizations: A Resource Dependence Perspective*. California: Stanford University Press.

Sanders, J. M. 2002. Ethnic boundaries and identity in plural societies. *Annual Review of Sociology, 28*: 327-357.

Sanders, J. M., & Nee, V. 1996. Immigrant self-employment: The family as social capital and the value of human capital. *American Sociological Review, 61*(2): 231-249.

Saxenian, A. 2002. Silicon Valley's new immigrant high-growth entrepreneurs. *Economic Development Quarterly, 16*(1): 20-31.

Scherbaum, C. A., & Ferreter, J. M. 2009. Estimating statistical power and required sample sizes for organizational research using multilevel modeling. *Organizational Research Methods, 12*(2), 347-367.

Schmenner, R. W., Huber, J. C., & Cook, R. L. 1987. Geographic differences and the location of new manufacturing facilities. *Journal of Urban Economics, 21*(1): 83-104.

Sears, D. O., Fu, M., Henry, P. J., & Bui, K. 2003. The origins and persistence of ethnic identity among the new immigrant groups. *Social Psychology Quarterly, 66*(4): 419-437.

Sequeira, J. M. & Rasheed, A.A. 2006. Start-up and growth of immigrant small businesses: The impact of social and human capital. *Journal of Developmental Entrepreneurship, 11*(4): 357-375.

Shaver, J. M., & Flyer, F. 2000. Agglomeration economies, firm heterogeneity, and foreign direct investment in the United States. *Strategic Management Journal, 21*(12): 1175-1194.

Shepherd, D., Patzelt, H., & Baron, R. 2013. I Care About Nature, but…: Disengaging values in assessing opportunities that cause Harm. *Academy of Management Journal, 56*(5): 1251-1273.

Shepherd, D. A., & Zacharakis, A. 2002. Venture capitalists' expertise: A call for research into decision aids and cognitive feedback. *Journal of Business Venturing, 17*(1): 1-20.

Short, J. C., Ketchen, D. J., Combs, J. G., & Ireland, R. D. 2010. Research methods in entrepreneurship opportunities and challenges. *Organizational Research Methods, 13*(1): 6-15.

Singh, R. 1975. Information integration theory applied to expected job attractiveness and satisfaction. *Journal of Applied Psychology*, *60*(5): 621-623.

Snijder, T. A. B. 2005. Power and sample size in multi- level designs. In B. S. Everitt & D. C. Howell (Eds.), Encyclopedia of statistics in behavioral science: 1570-1573. Chichester, U.K.: Wiley.

Souitaris, V., Zerbinati, S., & Al-Laham, A. 2007. Do entrepreneurship programs raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, *22*(4): 566-591.

Spybrook, J., Bloom, H., Congdon, R., Hill, C., Martinez, A., Raudenbush, S. (2015, March 14). Optimal design plus empirical evidence: Documentation for the "Optimal Design" Software. Retrieved from http://hlmsoft.net/od/od-manual-20111016-v300.pdf.

Tajfel, H. 1979. Individuals and groups in social psychology. *British Journal of Social and Clinical Psychology*, *18*(2): 183-190.

Tapp, S. R. 1984. Brunswik's lens model: A review and extension to consumer research. *Advances in Consumer Research*, *11*: 103-108.

Terjesen, S., & Elam, A. 2009. Transnational entrepreneurs' venture internationalization strategies: A practice theory approach. *Entrepreneurship Theory and Practice*, *33*(5): 1093-1120.

Vinogradov, E., & Isaksen, E. J. 2008. Survival of new firms owned by natives and immigrants in Norway. *Journal of Developmental Entrepreneurship*, *13*(1): 21-38.

Wadhwa, V., Rissing, B., Saxenian, A., Gereffi, G. 2007. Education, entreprneurship and immigration: America's new immigrant entrepreneurs, Part Ⅱ, Edwin Marion Kauffman Foundation.

Waldinger, R. 1984. Immigrant enterprise in the New York garment industry. *Social Problems*, *32*(1): 60- 71.

Waldinger, R. 1993. The ethnic enclave debate revisited. *International Journal of Urban and Regional Research*, *17*(3): 444-452.

Watson, K., Hogarth-Scott, S., & Wilson, N. 1998. Small business start-ups: Success factors and support implications. *International Journal of Entrepreneurial Behavior & Research*, *4*(3): 217-238.

Westphal, J. D. 1999. Collaboration in the boardroom: Behavioral and performance consequences of CEO-board social ties. *Academy of Management Journal*, *42*(1): 7-24.

What works for small businesses: A state and local government reference guide of proven practices for assisting small businesses. (2008). Retrieved from: http://www.acq.osd.mil/osbp/docs/reference_of_state_and_local_government_resources.Pdf.

Wheeler, D., & Mody, A. 1992. International investment location decisions: The case of U.S. firms. *Journal of International Economics*, *33*(1): 57-76.

Wheeler, A. R., Shanine, K. K., Leon, M. R., & Whitman, M. V. 2014. Student-recruited samples in organizational research: A review, analysis, and guidelines for future research. *Journal of Occupational and Organizational Psychology*, *87*(1): 1-26.

Williams, D. W., & Grégoire, D. A. 2015. Seeking commonalities or avoiding differences: Re-conceptualizing distance and its effects on internationalization decisions. *Journal of International Business Studies*. *46*: 253-284.

Wills, A. (2015, November 1). Dallas Fort Worth area is ranked as a prime location for black entrepreneurs. Retreieved from: http://financialjuneteenth.com/dallas-fort-worth-area-is-ranked-as-a-prime-location-for-black-entrepreneurs/

Wilson, K. L., & Portes, A. 1980. Immigrant enclaves: An analysis of the labor market experiences of Cubans in Miami. *American Journal of Sociology*, *86*(2): 295-319.

Wood, M. S., McKelvie, A., & Haynie, J. M. 2014. Making it personal: Opportunity individuation and the shaping of opportunity beliefs. *Journal of Business Venturing*, *29*(2): 252-272.

Wood, M. S., & Williams, D. W. 2014. Opportunity evaluation as rule-based decision making. *Journal of Management Studies*, *51*(4): 573-602.

Yoon, I. J. 1991. The changing significance of ethnic and class resources in immigrant businesses: the case of Korean immigrant businesses in Chicago. *International Migration Review*, *25*(2): 303-332.

Zarrugh, L. H. 2007. From workers to owners: Latino entrepreneurs in Harrisonburg, Virginia. *Human Organization*, *66*(3): 240-248.

Zelinsky, W. 2001. *The Enigma of Ethnicity: Another American Dilemma*. Iowa: University of Iowa Press.

Zelinsky, W., & Lee, B.A. 1998. Heterolocalism: An alternative model of the sociospatial behaviour of immigrant ethnic communities. *International Journal of Population Geography*, *4*: 281-298.

Zhou, Y. 1998. Beyond Ethnic Enclaves: Location strategies of Chinese producer service firms in Los Angeles. *Economic Geography*, *74*(3): 228-251.

Appendix

Thank you for your time! This study is about entrepreneurs' location decisions.

With respect to your career after graduation, please tell us about your career intentions. If you have already graduated, tell us about your intentions to continue being an entrepreneur.

To what extent does the following statement describes your future career plans:

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
I intend to be an entrepreneur (i.e., self-employed and/or own my own business) either immediately after graduation or in the future.	○	○	○	○	○	○	○

>>

This entire study should take about 20 minutes to complete. It may take a little longer on the first few pages, but once you are familiar with it, it will go faster.

Study Purpose

- To better understand how aspiring entrepreneurs evaluate location alternatives for their businesses.

Study Contributions

- To better educate entrepreneurs on how to evaluate location alternatives for their businesses.
- To inform state governments about the support they can provide to entrepreneurs.

Your Tasks

1. You will be presented with a series of location profiles where we vary specific characteristics of a given location for a future business.

2. **You will evaluate each profile by rating how likely you are to choose that location for your future business.**

3. The study will conclude with a few questions regarding your demographic characteristics.

Please know that your responses will remain **confidential**, are collected for the purpose of academic research only and are not individually identifiable. Your participation is voluntary. You are free to withdraw at any time; however, incomplete responses cannot be used in our analysis.

In exchange for your participation, we can provide, upon request, an executive summary of our results and what these results mean for you, as an aspiring entrepreneur.

By clicking on the 'continue' button, you consent to take part in our study.

- **I wish to continue with the study.**
- **I do not wish to continue with the study.**

From the drop-down menu, please select the industry in which you intend to start your business. If you have already started a business, please tell us the industry.

When do you expect to start your future business? If you have already started, please tell us how long after graduation did you start your business?

In 0-12 months	In 1-2 years	In 3-4 years	In 5-6 years	In 7-8 years	In 9-10 years	In more than 10 years
○	○	○	○	○	○	○

How would you describe your ethnic heritage (e.g., Latino, Hispanic, Hmong, Iranian, Indian, Euro-American, etc.)

Below, we will ask you to consider the extent of your co-ethnic and non-co-ethnic relationships in different business locations. The ethnicity you described above represents your **co-ethnic relationships** (family and friends of your ethnicity).

<< >>

ATTRIBUTE DEFINITIONS

In the following screens, you will be asked to consider how changes in costs of doing business, intensity of competition, levels of government support, the number your co-ethnic and non-coethnic relationships influence the likelihood that you choose the given location described in each profile for your future business. Various combinations of these attributes will be presented to you in a series of scenarios. Below is the formal definition of each attribute.

Costs of doing business:	According to industrial and geographic comparative reports, in this location, costs of doing business including tax rates, wage rates, and costs of transporting raw materials to the business and also costs of transporting final goods to target markets are either **HIGH (higher than the national average)** or **LOW (lower than the national average).**
Competition:	Competition across businesses that provide similar products and services to the same customers as your business is either **HIGH** or **LOW**.
Government support:	In this location, the state government provides either **HIGH (strong) support** or **LOW (weak) support** in terms of temporary tax exemptions, free business-related training and counselling, and incubator-related services to entrepreneurs.
Co-ethnic social capital:	In this location, you have either **HIGH (several)** or **LOW (few) family members and friends of your ethnicity** that you can rely on for support.
Non-coethnic social capital:	In this location, you have either **HIGH (several) or LOW (few) friends who are not of your ethnicity** and you can rely on them for support.

When making location decisions, please *use your imagination* to put yourself in the context of each scenario, answering questions as if you were *actually in* the situation.

Each scenario should be considered as a *separate decision*, independent of all the others; you will not be able to return to profiles already completed.

On the next page, we will begin with the first combination of attributes for you to evaluate.

If you are ready to begin, please click the arrow below to continue to the first decision.

>>

A given location is characterized as follows:

(Hover your mouse over attribute names to view definitions.)

Costs of doing business: *Low*

Competition: *Low*

Co-ethnic social capital: *Low*

Non-co-ethnic social capital: *Low*

Government support: *Low*

Based on the attributes described above, how likely

	Very Unlikely	Unlikely	Slightly Unlikely	Undecided	Slightly Likely	Likely	Strongly Likely
are you to select this location for your start-up?	○	○	○	○	○	○	○

<< >>

Thank for your valuable responses!

You are almost done, and we greatly appreciate your time and effort! There are a few more short screens!

Imagine you are in the process of founding a start-up in the U.S. Based on your financial situation right now, to what extent would you use each one of the resources below for your start-up expenses?
(To view definitions of items, hover your mouse over them.)

	Not at all	Very Little	Little	Moderately	To some degree	To a large degree	This is the main financial resource that I will use for my future business.
Your personal savings	○	○	○	○	○	○	○
Your family wealth in the U.S.	○	○	○	○	○	○	○
Your family wealth in your country of origin	○	○	○	○	○	○	○
Borrowing money from your friends in the U.S. who are of your ethnicity	○	○	○	○	○	○	○
Borrowing money from your friends in the U.S. who are not of your ethnicity	○	○	○	○	○	○	○
Borrowing money from your ethnic rotating credit association in the U.S.	○	○	○	○	○	○	○
Equity investors	○	○	○	○	○	○	○
Angel investors	○	○	○	○	○	○	○
Low-interest bank loans from U.S. banks offered to small businesses	○	○	○	○	○	○	○
Credit cards	○	○	○	○	○	○	○
Are there any other financial resources that you may use for your future business in the U.S.? Write in the box below.	○	○	○	○	○	○	○

	Not at all	Very Little	Little	Moderately	To some degree	To a large degree	This is the main financial resource that I will use for my future business.

How many businesses have you founded, alone or with others, in your career?

If no start-ups founded, put 0.

Do you, alone or with others, currently own a business that you founded either in the US or anywhere else?

- Yes
- No

Are you, alone or with others, in the process of starting a business?

- Yes
- No

How many years of experience do you have as an entrepreneur?

Years

How many years of paid working experience do you have?

Years

How much experience do you have in terms of evaluating business locations?

No Experience at All	Low Familiarity	slightly Familiar	Neutral	Somewhat Familiar	Moderately Familiar	Extremely Familiar
○	○	○	○	○	○	○

What is the highest level of education you have completed so far?

▼

Are you currently studying at UT?

- ○ Yes
- ○ No

What degree are you currently pursuing at UTK? If already graduated, what was the last degree you completed at UTK?

What is the major which you are currently studying at UTK? If already graduated, what was the major of your last UTK degree and when did you graduate?

How many languages, including English, can you speak?

<< >>

Please mark your level of agreement with statements below.

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree
I am happy to be a member of my ethnic community.							
I have strong sense of belonging to my ethnic community.							
I have a lot of pride in my ethnic community and its accomplishments.							
I feel a strong attachment to my ethnic community.							
I feel good about my cultural and ethnic background.							

<< >>

What is your gender?

- Male
- Female

How old are you?

0 Years

In which country were you born?

Imagine that you are in the process of opening your start-up in the United States. Please indicate how important each of the following location characteristics is for your location decision? *(To view definition of each item, hover your mouse over it.)*

	Not at All Important	Low Importance	Slightly Important	Neutral	Moderately Important	Very Important	Extremely Important
Costs of Doing Business	○	○	○	○	○	○	○
Competition	○	○	○	○	○	○	○
Government Support	○	○	○	○	○	○	○
Co-ethnic Social Capital	○	○	○	○	○	○	○
Non-co-ethnic Social Capital	○	○	○	○	○	○	○

Please name any other factors that you are likely to consider in choosing your start-up location which is not named in the question above?

Table 2-1. Summary of Ethnic Enclave Research

Researchers	Field of Study	Database/Sample	Findings
Portes (1981)	Sociology	---	• He officially introduced the characteristics of ethnic enclaves.
Portes (1987)	Sociology	Cuban immigrants in Florida	• Social origins of the formation of the Cuban ethnic economy
Portes and Jensen (1989)	Sociology	Mariel Cuban Refugees	• Living at an ethnic enclave is different from working at an enclave. • Enclave workers do not receive lower returns on human capital investments.
Alvarez (1990)	Anthropology	Mexican businesses in the U.S.	• Mexican businesses' entrepreneurial activities in Los Angeles demonstrate the primary features of an ethnic enclave.
Bates (1994)	Sociology	Census Bureau's Characteristics of Business Owners (CBO) / Asian immigrant entrepreneurs	• Asian immigrants are more likely to fail if they serve a minority clientele.
Chaganti and Greene (2002)	Management	Asian and Latino entrepreneurs	• The more immigrant-owned businesses are involved in the ethnic community, the more they adopt the characteristics and the traditional values of the ethnic enclave.
Kalnins and Chung (2006)	Management	Gujarati hotel owners in the U.S.	• The proximate presence of branded Gujarati hotels benefits the unbranded Gujarati motel owners.
Ndofor and Priem (2011)	Management	Immigrant entrepreneurs in the U.S.	• Immigrant entrepreneurs with human and financial capital pursue dominant market strategies whereas those with coethnic social capital pursue enclave strategy.

Table 3-1. Research Hypotheses

Direct Effects	H1. The propensity to select a location increases as location-specific costs of doing business decreases. H2. The propensity to select a location increases as location-specific competition decreases. H3. The propensity to select a location increases as location-specific government support. H4a. The propensity to select a location increases as the number of location-specific coethnic ties increases. H4b. The propensity to select a location increases as the number of location-specific non-coethnic ties increases.
Moderating Effects	H5. Non-coethnic social capital moderates the relationship between location-specific coethnic social capital and location preference such that the positive relationship becomes less positive as the non-coethnic social capital increases. H6. Social identification with the coethnic community at the host country moderates the relationship between location-specific coethnic social capital and location preference such that the positive relationship between becomes more positive as social identification with the coethnic community increases. H7. Human capital moderates the relationship between coethnic social capital and location preference such that the positive relationship becomes less positive as immigrant entrepreneurs' human capital increases. H8. Human capital moderates the relationship between location-specific non-coethnic social capital and location preference such that the positive relationship becomes less positive as immigrant entrepreneur's human capital increases. H9. Reliance on coethnic financial capital moderates the relationship between coethnic social capital and location preference, such that the positive relationship becomes more positive when the immigrant entrepreneur's reliance on financial capital funded by the coethnic community increases.

Table 4-1. Attributes Importance

Attribute	Mean	Std.
Costs of doing business	5.98	1.30
Competition	5.59	1.24
Government support	5.49	1.30
Coethnic SC	4.20	1.40
Non-Coethnic SC	4.09	1.46

Table 4-2. Operationalization of Independent Variables

Attribute	Low	High
Costs of doing business	According to industrial and geographic comparative reports, in this location, costs of doing business including tax rates, wage rates, and costs of transporting raw materials to the business and also costs of transporting final goods to target markets are low (lower than the national average).	According to industrial and geographic comparative reports, in this location, costs of doing business including tax rates, wage rates, and costs of transporting raw materials to the business and also costs of transporting final goods to target markets are high (higher than the national average).
Competition	Competition across businesses that provide similar products and services to the same customers as your business is low.	Competition across businesses that provide similar products and services to the same customers as your business is high.
Government support	In this location, the state government provides low (weak) support in terms of temporary tax exemptions, free business-related training and counselling, and incubator-related services to entrepreneurs.	In this location, the state government provides high (strong) support in terms of temporary tax exemptions, free business-related training and counselling, and incubator-related services to entrepreneurs.
Coethnic social capital	In this location, you have low (few) family members and friends of your ethnicity that you can rely on for support.	In this location, you have high (several) family members and friends of your ethnicity that you can rely on for support.
Non-coethnic social capital	In this location, you have low (few) friends who are not of your ethnicity and you can rely on them for support.	In this location, you have high (several) friends who are not of your ethnicity and you can rely on them for support.

Table 5-1. Descriptive Statistics

	N	Range	Min	Max	Mean	Std. Dev.	Variance
Control Variables							
Gender							
Male	55	1	0	1	0.69	0.45	0.21
Female	23	1	0	1	0.29	0.45	0.20
Intended Industry							
Agriculture	6	1	0	1	0.08	0.26	0.07
Trade	2	1	0	1	0.02	0.14	0.01
Services	51	1	0	1	0.68	0.45	0.21
Manufacturing	0	1	0	1	0	0	0
Other	16	1	0	1	0.21	0.4	0.16
Major							
Agriculture	2	1	0	1	0.02	0.14	0.01
Engineering	49	1	0	1	0.65	0.46	0.22
Architecture	1	1	0	1	0.01	0.09	0.009
Business	11	1	0	1	0.14	0.34	0.12
Education	2	1	0	1	0.02	0.14	0.01
Arts & Science	9	1	0	1	0.12	0.3	0.09
Communication and Information	1	1	0	1	0.01	0.09	0.009
Place of Birth							
Africa	6	1	0	1	0.07	0.24	0.06
Asia	41	1	0	1	0.52	0.48	0.24
Central America	1	1	0	1	0.01	0.09	0.009
Middle East	25	1	0	1	0.32	0.45	0.21
Oceania	1	1	0	1	0.01	0.09	0.009
Europe	4	1	0	1	0.05	0.20	0.04
Moderating Variables							
Identify with Ethnic Community	78	5.2	1.8	7	5.48	1.20	1.44
Human Capital							
Entrepreneurial Experience (years)	74	10	0	10	0.52	1.50	2.50
Paid Work Experience (years)	74	20	0	20	3.94	3.96	15.68
Location Decision Experience (Likert)	77	5	1	6	3.02	1.72	2.95
Reliance on Ethnic Finance	79	6	1	7	2.58	0.25	0.06
Dependent Variable							
Location Decision Likelihood	1264	6	1	7	4.38	1.78	3.20

Table 5-2. Estimates of Covariance Parameters for the Null Model.

Parameter	Estimate	Std. Error	Wald Z
Residual Variance (Level 1)	3.04	1.25	24.34***
Intercept Variance (Level 2)	0.15	0.005	2.79**

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001
n = 1264 decisions nested within 79 respondents

Table 5-3. Coefficient Estimates of Control Variables.

Parameters	Coefficient	Standard Error	t-ratio
Intercept	6.68	2.42	2.75**
Control Variables			
Gender			
Male	-0.003	0.16	-0.01
Female	Reference Category		
Intended Industry			
Agriculture	0.13	0.32	0.42
Trade	-0.29	0.46	-0.62
Service	-0.03	0.18	-0.19
Manufacture	-0.88	0.66	-1.34
Other	Reference Category		
Major			
Agriculture	-0.30	0.47	-0.65
Engineering	0.10	0.24	0.43
Archit & Design	0.60	0.66	0.91
Business	-0.28	0.28	-1.00
Communication	-0.34	0.64	-0.54
Education	-0.12	0.49	-0.24
Arts & Sciences	Reference Category		
Place of Birth			
Africa	-1.08	0.41	-2.63†
Asia	-0.31	0.32	-0.96
Central America	0.44	0.68	0.65
Middle East	-0.64	0.35	-1.82*
Oceania	-0.60	0.79	-0.76
Europe	Reference category		

Table 5-4. Coefficient Estimates of Main Effects

Parameters	Coefficient	Standard Error	t-ratio
Intercept	6.58	2.44	2.68**
Independent Variables			
Costs of Doing Business	-1.07	0.08	-13.29***
Competition	-0.75	0.08	-9.32***
Government Support	1.28	0.08	15.87***
Coethnic Social Capital	0.48	0.08	5.99***
Non-Coethnic Social Capital	0.32	0.08	4.00***

$p < 0.10$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$
n = 1264 decisions nested within 79 respondents

Table 5-5. Model-fit Statistics

(Controls and Predictors Model)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4902.02 (81)	4906.02 (81)	4916.18 (81)	0 (81)
New Model	4514.23 (86)	4518.23 (86)	4528.45 (86)	0.32 (86)
df_{Change}	-4	-4	-4	-4
χ^2_{Change}	387.79	387.79	387.79	-0.32

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-6. Estimates of Covariance Parameters

(Main Effects)

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model Variance	Residual	3.04	0.12	24.34***
New Model Variance	Residual	2.03	0.08	24.135***

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001
n = 1264 decisions nested within 79 respondents

Table 5-7. Coefficient Estimates of Level-2 Variables

Parameters	Coefficient	Standard Error	t-ratio
Intercept	5.70	2.97	1.91†
Level-1 Variables			
Costs of Doing Business	-1.10	0.11	-10.00***
Competition	-0.71	0.11	-6.46***
Costs of Doing Business	1.34	0.11	12.16***
Coethnic Social Capital	0.51	0.11	4.64***
Non-Coethnic Social Capital	0.31	0.11	2.82**
Level-2 Variables			
Identification with Ethnic Community	-0.11	0.13	-0.84
Human Capital			
Entrepreneurial Experience	0.0007	0.03	-13.84
Paid Work Experience	-0.009	0.02	-0.34
Location Decision Experience	-0.002	0.04	-0.05
Coethnic Financial Capital	0.01	0.13	0.08

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001
n = 1264 decisions nested within 79 respondents

Table 5-8. Estimates of Moderation

(Coethnic SC x Non-coethnic SC)

Final Estimation of Fixed Effects	**Coefficient**	**Standard Error**	**t-ratio**
Intercept	6.53	2.44	2.66**
Independent Variables			
Costs of Doing Business	-1.07	0.08	-13.29***
Competition	-0.75	0.08	-9.32***
Government Support	1.28	0.08	15.87***
Coethnic Social Capital	0.58	0.11	5.07***
Non-Coethnic Social Capital	0.41	0.11	3.67***
Interactions			
Coethnic Social x Non-Coethnic Social	-0.192	0.16	-1.19

Table 5-9. Model-fit Statistics

(Coethnic SC x Non-Coethnic SC)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4444.96 (85)	4448.96 (85)	4459.10 (85)	0.32 (85)
New Model	4445.43 (86)	4449.43 (86)	4459.57 (86)	0 (86)
df_{Change}	-1	-1	-1	-1
χ^2_{Change}	-0.47	-0.47	-0.47	0.32

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-10. Covariance Parameters

(Coethnic SC x Non-coethnic SC)

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model Variance	Residual	2.03	0.08	24.13***
New Model Variance	Residual	2.03	0.08	24.12***

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-11. Estimates of Moderation Effect

(Coethnic SC x Identification)

Final Estimation of Fixed Effects	Coefficient	Standard Error	t-ratio
Intercept	6.56	2.45	2.65**
Independent Variables			
Costs of Doing Business	-1.07	0.08	-13.29***
Competition	-0.75	0.08	-9.32***
Government Support	1.28	0.08	15.86***
Coethnic Social Capital	0.48	0.08	5.98***
Non-Coethnic Social Capital	0.32	0.08	4.00***
Identification	0.01	0.06	0.17
Interactions			
Coethnic Social Capital x Identification	0.049	0.06	0.72

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-12. Model-fit Statistics
(Coethnic SC x Identification with Coethnic Community)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4510.74 (28)	4514.74 (28)	4524.95 (28)	0.009 (28)
New Model	4513.75 (29)	4517.75 (29)	4527.97 (29)	0 (29)
df_{Change}	-1	-1	-1	-1
χ^2_{Change}	-3.01	-3.01	-3.01	0.009

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001
n = 1264 decisions nested within 79 respondents

Table 5-13. Covariance Parameters

(Coethnic SC x Identification)

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model Variance	Residual	2.03	0.08	24.13***
New Model Variance	Residual	2.03	0.08	24.12***

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-14. Estimates of Moderation Effect

(Coethnic SC x Entrepre Experience)

Final Estimation of Fixed Effects	**Coefficient**	**Standard Error**	**t-ratio**
Intercept	6.55	2.45	2.67*
Independent Variables			
Costs of Doing Business	-1.11	0.08	-13.84***
Competition	-0.75	0.08	-9.36***
Government Support	1.26	0.08	15.72***
Coethnic Social Capital	0.52	0.09	5.51***
Non-Coethnic Social Capital	0.32	0.08	24.06**
Entrepreneurial Experience	0.03	0.22	-1.21
Interactions			
Coethnic Social x Human Capital			
Coethnic Social x Entrepreneurial	0.04	0.03	0.86
Experience			

†$P < 0.10$; *$P < 0.05$; **$P < 0.01$; ***$P < 0.001$

n = 1264 decisions nested within 79 respondents

Table 5-15. Model-fit Statistics

(Coethnic SC x Entrepre Experience)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4578.01 (28)	4582.01 (28)	4592.25 (28)	0 (28)
New Model	4581.98 (29)	4585.98 (29)	4596.22 (29)	0 (29)
df_{Change}	1	1	1	1
χ^2_{Change}	-103.97	-3.97	-3.97	0

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-16. Covariance Parameters

(Coethnic SC x Entrepre Experience)

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model Variance	Residual	2.05	0.08	24.28***
New Model Variance	Residual	2.05	0.08	24.29***

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-17. Estimates of Coefficients

(Coethnic SC x Paid Work Experience)

Final Estimation of Fixed Effects	Coefficient	Standard Error	t-ratio
Intercept	5.75	1.75	3.27**
Independent Variables			
Costs of Doing Business	-1.11	0.08	-13.87***
Competition	-0.75	0.08	-9.39***
Government Support	1.26	0.08	15.76***
Coethnic Social Capital	0.47	0.08	5.86***
Non-Coethnic Social Capital	0.32	0.08	4.07***
Paid Work Experience	0.03	0.02	-1.14
Interactions			
Coethnic Social x Human Capital			
Coethnic Social x Paid Work Experience	0.07	0.02	2.73**

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5.18. Model-fit Statistics

(Coethnic SC x Paid Work Experience)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4578.35 (28)	4582.35 (28)	4592.59 (28)	0 (28)
New Model	4581.43 (22)	4585.43 (22)	4595.68 (22)	0.004 (22)
df_{Change}	6	6	6	6
χ^2_{Change}	-3.08	-3.08	-3.08	-0.004

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-19. Covariance Parameters

(Coethnic SC x Paid Work Experience)

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model Variance	Residual	2.05	0.08	24.29***
New Model Variance	Residual	2.04	0.08	24.28***

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-20. Coethnic SC Moderation

(Coethnic SC x Location Decision Experience)

Final Estimation of Fixed Effects	Coefficient	Standard Error	t-ratio
Intercept	6.59	2.46	2.67*
Independent Variables			
Costs of Doing Business	-1.11	0.08	-13.83***
Competition	-0.75	0.08	-9.36***
Government Support	1.26	0.08	15.72***
Coethnic Social Capital	0.48	0.08	5.99***
Non-Coethnic Social Capital	0.32	0.08	4.06***
Location Decision Experience	-0.02	0.05	-0.44
Interactions			
Coethnic Social x Human Capital			
Coethnic Social x Location Decision Experience	0.04	0.04	0.84

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-21. Model-fit Statistics

(Coethnic SC x Location Decision Experience)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4577.59 (28)	4581.59 (28)	4591.84 (28)	0 (28)
New Model	4581.14 (29)	4585.14 (29)	4595.38 (29)	0 (29)
df_{Change}	-1	-1	-1	-1
χ^2_{Change}	-3.55	-3.55	-3.55	0

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-22. Covariance Parameters

(Coethnic SC x Location Decision Experience)

Table 43-1

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model Variance	Residual	2.05	0.08	24.29***
New Model Variance	Residual	2.05	0.08	24.28***

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-23. Estimates of Moderation

(Coethnic SC x Ethnic Financial Capital)

Final Estimation of Fixed Effects	Coefficient	Standard Error	t-ratio
Intercept	5.46	2.51	2.17*
Independent Variables			
Costs of Doing Business	-1.11	0.08	-13.85***
Competition	-0.75	0.08	-9.37***
Government Support	1.26	0.08	15.73***
Coethnic Social Capital	0.48	0.08	6.00***
Non-Coethnic Social Capital	0.32	0.08	4.06**
Ethnic Financial Capital	0.16	0.07	2.06*
Interactions			
Coethnic Social x Ethnic Financial Capital	-0.11	0.06	-1.59

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-24. Model-fit Statistics

(Coethnic SC x Ethnic Financial Capital)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4574.42 (28)	4578.42 (28)	4588.66 (28)	0
New Model	4575.38 (29)	4579.38 (29)	4589.63 (29)	0.004
df_{Change}	-1	-1	-1	-1
χ^2_{Change}	-0.96	-0.96	-0.96	-0.004

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-25. Covariance Parameters

(Coethnic SC x Ethnic Financial Capital)

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model Variance	Residual	2.05	0.08	24.29***
New Model Variance	Residual	2.04	0.08	24.28***

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-26. Estimates of Moderation

(Non-Coethnic SC x Entrepre Experience)

Final Estimation of Fixed Effects	Coefficient	Standard Error	t-ratio
Intercept	6.60	2.45	2.69**
Independent Variables			
Costs of Doing Business	-1.11	0.08	-13.84***
Competition	-0.75	0.08	-9.36***
Government Support	1.26	0.08	15.72***
Coethnic Social Capital	0.48	0.08	5.98***
Non-Coethnic Social Capital	0.27	0.09	2.88**
Entrepreneurial Experience	0.01	0.04	0.488
Interactions			
Non-Coethnic Social x Human Capital			
Non-Coethnic Social x Entrepreneurial Experience	-0.03	0.03	-1.01

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-27. Model-fit Statistics

(Non-Coethnic SC x Entrepre Experience)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4578.01 (28)	4582.01 (28)	4592.25 (28)	0 (28)
New Model	4581.70 (29)	4585.70 (29)	4595.94 (29)	0 (29)
df_{Change}	-1	-1	-1	-1
χ^2_{Change}	-3.69	-3.69	-3.69	0

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-28. Covariance Parameters

(Non-Coethnic SC x Entrepre Experience)

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model	Residual	2.05	0.08	
Variance			24.29***	
New Model	Residual	2.05	0.08	
Variance			24.28***	

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-29. Estimates of Moderation

(Non-coethnic SC x Paid Work Experience)

Final Estimation of Fixed Effects	Coefficient	Standard Error	t-ratio
Intercept	6.67	2.46	2.71**
Independent Variables			
Costs of Doing Business	-1.10	0.08	-13.83***
Competition	-0.75	0.08	-9.36***
Government Support	1.26	0.08	15.72***
Coethnic Social Capital	0.48	0.08	5.98***
Non-Coethnic Social Capital	0.32	0.08	4.02***
Paid Work Experience	-0.01	0.03	-0.57
Interactions			
Non-Coethnic Social x Human Capital			
Non-Coethnic Social x Paid Work Experience	0.01	0.02	0.61

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-30. Model-fit Statistics

(Non-Coethnic SC x Paid Work Experience)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4578.35 (28)	4582.35 (28)	4592.59 (28)	0 (28)
New Model	4583.26 (29)	4587.26 (29)	4597.51 (29)	0 (29)
df_{Change}	-1	-1	-1	-1
χ^2_{Change}	-4.91	-4.91	-4.91	0

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-31. Covariance Parameters

(Non-Coethnic SC x Paid Work Experience)

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model Variance	Residual	2.05	0.08	24.29***
New Model Variance	Residual	2.05	0.08	24.28***

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-32. Estimates of Moderation

(Non-Coethnic SC x Location Decision Experience)

Final Estimation of Fixed Effects	Coefficient	Standard Error	t-ratio
Intercept	6.59	2.46	2.67*
Independent Variables			
Costs of Doing Business	-1.11	0.08	-13.84***
Competition	-0.75	0.08	-9.36***
Government Support	1.26	0.08	15.72***
Coethnic Social Capital	0.48	0.08	5.98***
Non-Coethnic Social Capital	0.32	0.08	4.05***
Location Decision Experience	0.01	0.05	0.37
Interactions			
Non-Coethnic Social x Human Capital			
Non-Coethnic Social x Location Decision Experience	-0.04	0.04	-0.89

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-33. Model-fit Statistics

(Non-Coethnic SC x Location Decision Experience)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4577.59 (28)	4581.59 (28)	4591.84 (28)	0
New Model	4581.06 (29)	4585.06 (29)	4595.31 (29)	0
df_{Change}	-1	-1	-1	-1
χ^2_{Change}	-3.47	-3.47	-3.47	0

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-34. Covariance Parameters

(Non-Coethnic SC x Location Decision Experience)

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model Variance	Residual	2.05	0.08	24.29***
New Model Variance	Residual	2.05	0.08	24.28***

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-35. Estimates of Moderation Effect

(Costs of Doing Business x Competition)

Final Estimation of Fixed Effects	Coefficient	Standard Error	t-ratio
Intercept	6.65	2.42	2.73**
Independent Variables			
Costs of Doing Business	-1.25	0.11	-11.06***
Competition	-0.89	0.11	-7.89***
Government Support	1.26	0.08	15.74***
Coethnic Social Capital	0.48	0.08	5.99***
Non-Coethnic Social Capital	0.32	0.08	4.06***
Interaction			
Costs of Business x Competition	0.28	0.16	1.78†

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-36. Model-fit Statistics

(Costs x Competition)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4514.23 (86)	4518.23 (86)	4528.45 (86)	0.32 (86)
New Model	4571.81 (28)	4575.81 (28)	4586.05 (28)	0.004 (28)
df_{Change}	58	58	58	58
χ^2_{Change}	-57.58	-57.58	-57.58	0.31

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-37. Covariance Parameters

(Costs of Doing Business x Competition)

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model	Residual	2.05	0.08	
Variance			24.29***	
New Model	Residual	2.04	0.08	
Variance			24.28***	

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-38. Estimates of Moderation

(Costs x Ethnic Financial Capital)

Final Estimation of Fixed Effects	Coefficient	Standard Error	t-ratio
Intercept	5.53	2.51	2.20*
Independent Variables			
Costs of Doing Business	-1.26	0.11	-11.08***
Competition	-0.89	0.11	-7.90***
Government Support	1.26	0.08	15.76***
Coethnic Social Capital	0.48	0.08	6.00***
Non-Coethnic Social Capital	0.32	0.08	4.07***
Reliance on Ethnic Financial Capital	0.03	0.07	0.42
Interaction			
Costs of Business x Ethnic Financial Capital	0.14	0.06	2.07*

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-39. Model-fit Statistics

(Costs x Ethnic Financial Capital)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4574.42 (28)	4578.42 (28)	4588.66 (28)	0 (28)
New Model	4573.62 (28)	4577.62 (28)	4587.86 (28)	0.004 (28)
df_{Change}	0	0	0	0
χ^2_{Change}	0.80	0.80	0.80	-0.004

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-40. Estimates of Covariance Parameters

(Costs x Ethnic Financial Capital)

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model Variance	Residual	2.05	0.08	24.29***
New Model Variance	Residual	2.04	0.08	24.28***

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-41. Estimates of Moderation

(Government Support x Ethnic Financial Capital)

Final Estimation of Fixed Effects	Coefficient	Standard Error	t-ratio
Intercept	5.46	2.51	2.17*
Independent Variables			
Costs of Doing Business	-1.11	0.08	-13.85***
Competition	-0.75	0.08	-9.37***
Government Support	1.26	0.08	15.75***
Coethnic Social Capital	0.48	0.08	5.99***
Non-Coethnic Social Capital	0.32	0.08	4.06***
Reliance on Ethnic Financial Capital	0.17	0.07	2.19*
Interaction			
Government Support x Ethnic Financial Capital	-0.13	0.06	-1.88*

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-42. Model-fit Statistics

(Government Support x Ethnic Financial Capital)

Model	**-2LL (df)**	**AIC (df)**	**BIC (df)**	**Pseudo-R^2 (df)**
Old Model	4574.42 (28)	4578.42 (28)	4588.66 (28)	0 (28)
New Model	4574.36 (29)	4578.36 (29)	4588.60 (29)	0.004 (29)
df_{Change}	-1	-1	-1	-1
χ^2_{Change}	0.06	0.06	0.06	-0.004

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5-43. Estimates of Covariance

(Government Support x Ethnic Financial Capital)

Model	Parameters	Estimate	Standard Error	Wald Z
Old Model	Residual Variance	2.05	0.08	
			24.29***	
New Model	Residual Variance	2.04	0.08	
			24.28***	

Table 5-44. Summary of Hypotheses Testing

Hypothesis		Status
	Main Effects	
Hypothesis 1	The likelihood to choose a location increases as location-specific costs of doing business decreases.	Supported
Hypothesis 2	The likelihood to choose a location increases as location-specific competition decreases.	Supported
Hypothesis 3	The likelihood to choose a location increases as location-specific government support increases.	Supported
Hypothesis 4a	The likelihood to choose a location increases as the number of location-specific coethnic social capital increases.	Supported
Hypothesis 4b	The likelihood to choose a location increases as the number of location-specific non-coethnic social capital increases.	Supported
	Moderating Effects	
Hypothesis 5	Non-coethnic social capital moderates the relationship between location-specific coethnic social capital and the likelihood to choose a location.	Not Supported
Hypothesis 6	Social identification with the coethnic community at the host country moderates the relationship between location-specific coethnic social capital and the likelihood to choose a location.	Not Supported
Hypothesis 7	Human capital moderates the relationship between coethnic social capital and the likelihood to choose a location.	Not Supported
Hypothesis 8	Human capital moderates the relationship between location-specific non-coethnic social capital and the likelihood to choose a location.	Not Supported
Hypothesis 9	Reliance on coethnic financial capital moderates the relationship between coethnic social capital and the likelihood to choose a location.	Not Supported
Post-hoc 1	Location-specific competition moderates the relationship between costs of doing business and the likelihood to choose a location.	Marginally Supported
Post-hoc 2	Reliance on ethnic financial capital moderates the relationship between costs of doing business and the likelihood to choose a location.	Supported
Post-hoc 3	Reliance on ethnic financial capital moderates the relationship between government support and the likelihood to choose a location.	Supported

Table 5.45. Summary of Findings (1)

	Model 1: Control Variables		Model 2: Independent Variables		Model 3: Moderate Variables (1)		Model 4: Moderating Variables (2)		Model 5: Moderating Variables (3)	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Intercept	6.68**	2.42	5.39**	0.36	6.53**	2.42	6.56**	2.45	5.46*	2.51
Control Variables										
Gender										
Male	-0.003	0.16	-0.003	0.1	-0.003	0.16	-0.003	0.16	-0.003	0.16
Industry										
Agriculture	0.13	0.32	0.13	0.3	0.13	0.32	0.13	0.32	0.13	0.32
Trade	-0.29	0.46	-0.29	0.4	-0.29	0.46	-0.29	0.46	-0.29	0.46
Service	-0.03	0.18	-0.03	0.1	-0.03	0.18	-0.03	0.18	-0.03	0.18
Manufacture	-0.88	0.66	-0.88	0.6	-0.88	0.66	-0.88	0.66	-0.88	0.66
Major										
Agriculture	-0.30	0.47	-0.30	0.4	-0.30	0.47	-0.30	0.47	-0.30	0.47
Engineering	0.10	0.24	0.10	0.2	0.10	0.24	0.10	0.24	0.10	0.24
Architecture	0.60	0.66	0.60	0.6	0.60	0.66	0.60	0.66	0.60	0.66
Business	-0.28	0.28	-0.28	0.2	-0.28	0.28	-0.28	0.28	-0.28	0.28
Commun	-0.34	0.64	-0.34	0.6	-0.34	0.64	-0.34	0.64	-0.34	0.64
Education	-0.12	0.49	-0.12	0.4	-0.12	0.49	-0.12	0.49	-0.12	0.49
Place of Birth										
Africa	-1.08	0.41	-1.08	0.4	-1.08	0.41	-1.08	0.41	-1.08	0.41
Asia	-0.31	0.32	-0.31	0.3	-0.31	0.32	-0.31	0.32	-0.31	0.32
C. America	0.44	0.68	0.44	0.6	0.44	0.68	0.44	0.68	0.44	0.68
Middle East	-0.64	0.35	-0.64	0.3	-0.64	0.35	-0.64	0.35	-0.64	0.35
Oceania	-0.60	0.79	-0.60	0.7	-0.60	0.79	-0.60	0.79	-0.60	0.79
Independent Variables										
Costs			-1.0***	0.08	-1.1***	0.08	-1.1***	0.08	-1.11***	0.08
Comp			-0.7***	0.08	-0.7***	0.08	-0.7***	0.08	-0.7***	0.08
Coethnic SC			0.48***	0.08	0.57***	0.08	0.57***	0.08	0.57***	0.08

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5.45. Continued

	Model 1: Control Variables		Model 2: Independent Variables		Model 3: Moderating Variables (1)		Model 4: Moderating Variables (2)		Model 5: Moderating Variables (3)	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Non-coethnic SC			0.32***	0.08	0.42***	0.08	0.42***	0.08	0.42***	0.08
Moderating Variables										
Coethnic SC x Non-coethnic SC					-0.18	0.16				
Identification							0.01	0.06		
Identification x Coethnic SC							0.04	0.06		
Ethnic Financial Capital (EFC)									0.16	0.07
EFC x Coethnic SC									-0.11	0.08
-2 Log-likelihood	4902.02		4514.23		4444.9	4445.43	4510.7	4513.7	4574.4	4575.3
Δ -2 Log-likelihood			387.7			-0.47		-3.01		-0.96
Pseudo R^2	0		0.32		0.32	0	0.009	0	0	0.004
Δ Pseudo R^2			-0.32			0.32		0.009		-0.004

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5.46. Summary of Findings (2)

	Model 6: Control Variables		Model 7: Independent Variables		Model 8: Moderating Variables (4)		Model 9: Moderating Variables (5)		Model 10: Moderating Variables (6)	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Intercept	6.68**	2.42	5.39**	0.36	6.55*	2.45	5.75**	1.75	5.59*	2.46
Control Variables										
Gender (Male)	-0.003	0.16	-0.003	0.16	-0.003	0.16	-0.003	0.16	-0.003	0.16
Industry										
Agriculture	0.13	0.32	0.13	0.32	0.13	0.32	0.13	0.32	0.13	0.32
Trade	-0.29	0.46	-0.29	0.46	-0.29	0.46	-0.29	0.46	-0.29	0.46
Service	-0.03	0.18	-0.03	0.18	-0.03	0.18	-0.03	0.18	-0.03	0.18
Manufacture	-0.88	0.66	-0.88	0.66	-0.88	0.66	-0.88	0.66	-0.88	0.66
Major										
Agriculture	-0.30	0.47	-0.30	0.47	-0.30	0.47	-0.30	0.47	-0.30	0.47
Engineering	0.10	0.24	0.10	0.24	0.10	0.24	0.10	0.24	0.10	0.24
Architecture & Design	0.60	0.66	0.60	0.66	0.60	0.66	0.60	0.66	0.60	0.66
Business	-0.28	0.28	-0.28	0.28	-0.28	0.28	-0.28	0.28	-0.28	0.28
Communication	-0.34	0.64	-0.34	0.64	-0.34	0.64	-0.34	0.64	-0.34	0.64
Education	-0.12	0.49	-0.12	0.49	-0.12	0.49	-0.12	0.49	-0.12	0.49
Place of Birth										
Africa	-1.08	0.41	-1.08	0.41	-1.08	0.41	-1.08	0.41	-1.08	0.41
Asia	-0.31	0.32	-0.31	0.32	-0.31	0.32	-0.31	0.32	-0.31	0.32
Central America	0.44	0.68	0.44	0.68	0.44	0.68	0.44	0.68	0.44	0.68
Middle East	-0.64	0.35	-0.64	0.35	-0.64	0.35	-0.64	0.35	-0.64	0.35
Oceania	-0.60	0.79	-0.60	0.79	-0.60	0.79	-0.60	0.79	-0.60	0.79
Independent Variables										
Costs			-1.07***	0.08	-1.11***	0.08	-1.11***	0.08	-1.11***	0.08
Competition			-0.75***	0.08	-0.75***	0.08	-0.75***	0.08	-0.75***	0.08
Government Support			1.28***	0.08	1.26***	0.08	1.26***	0.08	1.26***	0.08

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5.46. Continued

	Model 6: Control Variables		Model 7: Independent Variables		Model 8: Moderating Variables (4)		Model 9: Moderating Variables (5)		Model 10: Moderating Variables (6)	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Coethnic SC			0.48***	0.08	0.57***	0.08	0.57***	0.08	0.57***	0.08
Non-coethnic SC			0.32***	0.08	0.42***	0.08	0.42***	0.08	0.42***	0.08
Moderating Variables										
Human Capital										
Entrepre Experience					0.03	0.22				
Entrepre Exp x Coethnic SC					0.04	0.03				
Paid Experience							0.03	0.02		
Paid Experience x Coethnic SC							0.07**	0.02		
Location Exp									-0.02	0.05
Location Exp x Coethnic SC									0.04	0.04
-2 Log-likelihood	4902.02		4514.23		4578.01	4581.98	4578.35	4581.43	4577.59	4581.14
Δ -2 Log-likelihood			387.7		-103.97	-0.47		-3.08		-3.55
Pseudo R^2	0		0.32		0	0	0	0.004	0	0
Δ Pseudo R^2			-0.32			0		-0.004		0

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001
n = 1264 decisions nested within 79 respondents

Table 5.47. Summary of Findings (3)

	Model 11: Control Variables		Model 12: Independent Variables		Model 13: Moderating Variables (4)		Model 14: Moderating Variables (5)		Model 15: Moderating Variables (6)	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Intercept	6.68**	2.42	5.39**	0.36	6.60**	2.45	6.67**	2.46	6.59*	2.46
Control Variables										
Gender										
Male	-0.003	0.16	-0.003	0.16	-0.003	0.16	-0.003	0.16	-0.003	0.16
Industry										
Agriculture	0.13	0.32	0.13	0.32	0.13	0.32	0.13	0.32	0.13	0.32
Trade	-0.29	0.46	-0.29	0.46	-0.29	0.46	-0.29	0.46	-0.29	0.46
Service	-0.03	0.18	-0.03	0.18	-0.03	0.18	-0.03	0.18	-0.03	0.18
Manufacture	-0.88	0.66	-0.88	0.66	-0.88	0.66	-0.88	0.66	-0.88	0.66
Major										
Agriculture	-0.30	0.47	-0.30	0.47	-0.30	0.47	-0.30	0.47	-0.30	0.47
Engineering	0.10	0.24	0.10	0.24	0.10	0.24	0.10	0.24	0.10	0.24
Architecture &	0.60	0.66	0.60	0.66	0.60	0.66	0.60	0.66	0.60	0.66
Design										
Business	-0.28	0.28	-0.28	0.28	-0.28	0.28	-0.28	0.28	-0.28	0.28
Communication	-0.34	0.64	-0.34	0.64	-0.34	0.64	-0.34	0.64	-0.34	0.64
Education	-0.12	0.49	-0.12	0.49	-0.12	0.49	-0.12	0.49	-0.12	0.49
Place of Birth										
Africa	-1.08	0.41	-1.08	0.41	-1.08	0.41	-1.08	0.41	-1.08	0.41
Asia	-0.31	0.32	-0.31	0.32	-0.31	0.32	-0.31	0.32	-0.31	0.32
Central America	0.44	0.68	0.44	0.68	0.44	0.68	0.44	0.68	0.44	0.68
Middle East	-0.64	0.35	-0.64	0.35	-0.64	0.35	-0.64	0.35	-0.64	0.35
Oceania	-0.60	0.79	-0.60	0.79	-0.60	0.79	-0.60	0.79	-0.60	0.79
Independent Variables										
Costs			-1.07***	0.08	-1.11***	0.08	-1.11***	0.08	-1.11***	0.08

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5.47. Continued

	Model 11: Control Variables		Model 12: Independent Variables		Model 13: Moderating Variables (4)		Model 14: Moderating Variables (5)		Model 15: Moderating Variables (6)	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Competition			-0.75***	0.08	-0.75***	0.08	-0.75***	0.08	-0.75***	0.08
Government Support			1.28***	0.08	1.26***	0.08	1.26***	0.08	1.26***	0.08
Coethnic SC			0.48***	0.08	0.57***	0.08	0.57***	0.08	0.57***	0.08
Non-coethnic SC			0.32***	0.08	0.42***	0.08	0.42***	0.08	0.42***	0.08
Moderating Variables										
Entrepre Experience					0.01	0.04				
Entrepre Experience x Non-Coethnic SC					-0.03	0.03				
Paid Experience							-0.01	0.03		
Paid Experience x Non-Coethnic SC							0.01	0.02		
Location Experience									0.01	0.05
Location Exp x Non-Coethnic SC									-0.04	0.04
-2 Log-likelihood	4902.02		4514.23		4578.01	4581.70	4578.35	4583.26	4577.59	4581.06
Δ -2 Log-likelihood			387.7			-3.69		-4.91		-3.47
Pseudo R^2	0		0.32		0	0	0	0	0	0
Δ Pseudo R^2			-0.32			0		0		0

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5.48. Summary of Supported Hypotheses and Post-hoc Analyses (1)

	Model 1: Control Variables		Model 2: Independent Variables		Model 3: Moderating Variables (1)		Model 4: Moderating Variables (2)		Model 5: Moderating Variables (3)	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Intercept	6.68**	2.42	5.39**	0.36	5.75**	1.75	6.65**	2.42	5.53*	2.20
Control Variables										
Gender										
Male	-0.003	0.16	-0.003	0.16	-0.003	0.16	-0.003	0.16	-0.003	0.16
Industry										
Agriculture	0.13	0.32	0.13	0.32	0.13	0.32	0.13	0.32	0.13	0.32
Trade	-0.29	0.46	-0.29	0.46	-0.29	0.46	-0.29	0.46	-0.29	0.46
Service	-0.03	0.18	-0.03	0.18	-0.03	0.18	-0.03	0.18	-0.03	0.18
Manufacture	-0.88	0.66	-0.88	0.66	-0.88	0.66	-0.88	0.66	-0.88	0.66
Major										
Agriculture	-0.30	0.47	-0.30	0.47	-0.30	0.47	-0.30	0.47	-0.30	0.47
Engineering	0.10	0.24	0.10	0.24	0.10	0.24	0.10	0.24	0.10	0.24
Architecture &	0.60	0.66	0.60	0.66	0.60	0.66	0.60	0.66	0.60	0.66
Design										
Business	-0.28	0.28	-0.28	0.28	-0.28	0.28	-0.28	0.28	-0.28	0.28
Communication	-0.34	0.64	-0.34	0.64	-0.34	0.64	-0.34	0.64	-0.34	0.64
Education	-0.12	0.49	-0.12	0.49	-0.12	0.49	-0.12	0.49	-0.12	0.49
Place of Birth										
Africa	-1.08	0.41	-1.08	0.41	-1.08	0.41	-1.08	0.41	-1.08	0.41
Asia	-0.31	0.32	-0.31	0.32	-0.31	0.32	-0.31	0.32	-0.31	0.32
Central America	0.44	0.68	0.44	0.68	0.44	0.68	0.44	0.68	0.44	0.68
Middle East	-0.64	0.35	-0.64	0.35	-0.64	0.35	-0.64	0.35	-0.64	0.35
Oceania	-0.60	0.79	-0.60	0.79	-0.60	0.79	-0.60	0.79	-0.60	0.79
Independent Variables										
Costs			-1.07***	0.08	-1.11***	0.08	-1.11***	0.08	-1.11***	0.08

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001

n = 1264 decisions nested within 79 respondents

Table 5.48. Continued

	Model 1: Control Variables		Model 2: Independent Variables		Model 3: Moderating Variables (1)		Model 4: Moderating Variables (2)		Model 5: Moderating Variables (3)	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Competition			-0.75***	0.08	-0.75***	0.08	-0.75***	0.08	-0.75***	0.08
Government Support			1.28***	0.08	1.26***	0.08	1.26***	0.08	1.26***	0.08
Coethnic SC			0.48***	0.08	0.57***	0.08	0.57***	0.08	0.57***	0.08
Non-coethnic SC			0.32***	0.08	0.42***	0.08	0.42***	0.08	0.42***	0.08
Moderating Variables										
Paid Experience					0.03	0.02				
Paid Experience x Coethnic SC					0.07**	0.02				
Costs x Competition							0.28†	0.16		
Ethnic Financial Capital									0.03	0.07
Ethnic Financial Capital x Costs									0.14*	0.06
-2 Log-likelihood	4902.02		4514.23		4578.35	4581.43	4514.23	4571.81	4574.42	4573.62
Δ -2 Log-likelihood			387.7			-3.08		-57.58		0.80
Pseudo R^2	0		0.32		0	0.004	0.32	0.004	0	0.004
Δ Pseudo R^2			-0.32			-0.004		0.31		-0.004

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001
n = 1264 decisions nested within 79 respondents

Table 5.49. Summary of Supported Hypotheses and Post-hoc Analyses (2)

	Model 1: Control Variables		Model 2: Independent Variables		Model 6: Moderating Variables (4)	
	b	s.e.	b	s.e.	b	s.e.
Intercept	6.68**	2.42	5.39**	0.36	5.46*	2.51
Control Variables						
Gender						
Male	-0.003	0.16	-0.003	0.16	-0.003	0.16
Industry						
Agriculture	0.13	0.32	0.13	0.32	0.13	0.32
Trade	-0.29	0.46	-0.29	0.46	-0.29	0.46
Service	-0.03	0.18	-0.03	0.18	-0.03	0.18
Manufacture	-0.88	0.66	-0.88	0.66	-0.88	0.66
Major						
Agriculture	-0.30	0.47	-0.30	0.47	-0.30	0.47
Engineering	0.10	0.24	0.10	0.24	0.10	0.24
Architecture &	0.60	0.66	0.60	0.66	0.60	0.66
Design						
Business	-0.28	0.28	-0.28	0.28	-0.28	0.28
Communication	-0.34	0.64	-0.34	0.64	-0.34	0.64
Education	-0.12	0.49	-0.12	0.49	-0.12	0.49
Place of Birth						
Africa	-1.08	0.41	-1.08	0.41	-1.08	0.41
Asia	-0.31	0.32	-0.31	0.32	-0.31	0.32
Central America	0.44	0.68	0.44	0.68	0.44	0.68
Middle East	-0.64	0.35	-0.64	0.35	-0.64	0.35
Oceania	-0.60	0.79	-0.60	0.79	-0.60	0.79
Independent Variables						

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001
n = 1264 decisions nested within 79 respondents

Table 5.49. Continued

	Model 1: Control Variables		Model 2: Independent Variables		Model 6: Moderating Variables (4)	
	b	s.e.	b	s.e.	b	s.e.
Costs			-1.07***	0.08	-1.11***	0.08
Competition			-0.75***	0.08	-0.75***	0.08
Gov Support			1.28***	0.08	1.26***	0.08
Coethnic SC			0.48***	0.08	0.57***	0.08
Non-coethnic SC			0.32***	0.08	0.42***	0.08
Moderating Variables						
Ethnic Financial Capital (EFC)					0.17*	0.07
EFC x Gov Support					-0.13*	0.06
-2 Log-likelihood	4902.02		4514.23		4574.42	4574.36
Δ -2 Log-likelihood			387.7			0.06
Pseudo R^2	0		0.32		0	0.004
Δ Pseudo R^2			-0.32			-0.004

†p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001
n = 1264 decisions nested within 79 respondents

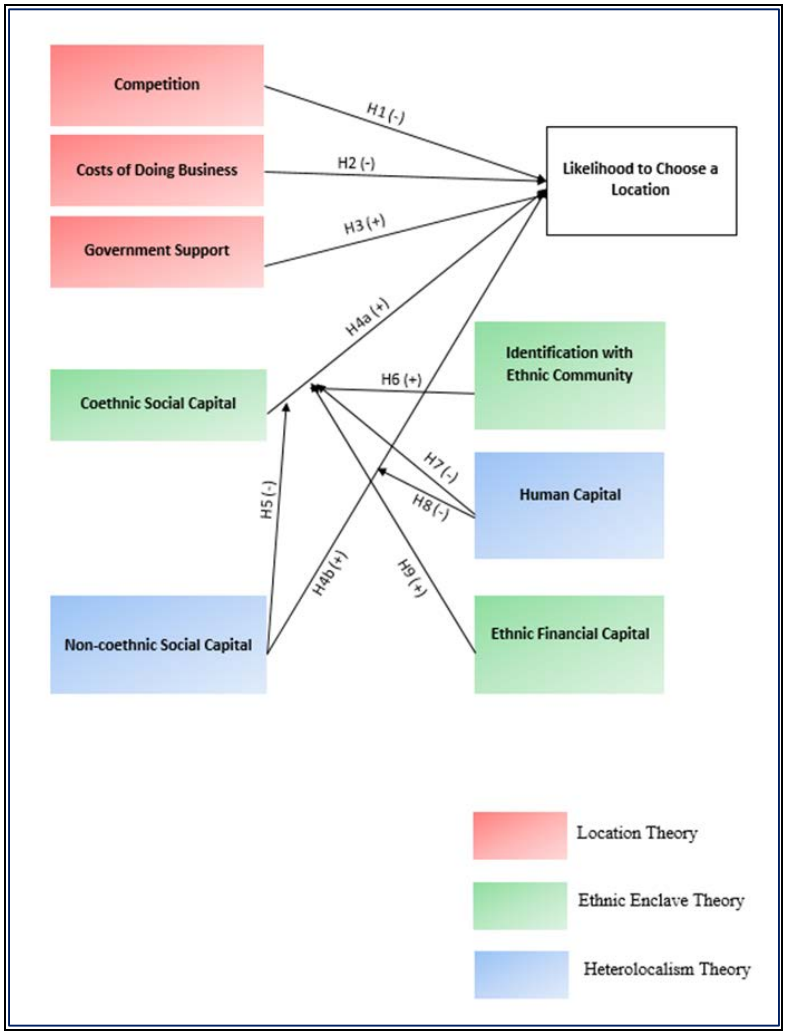

Figure 3.1. Research Model

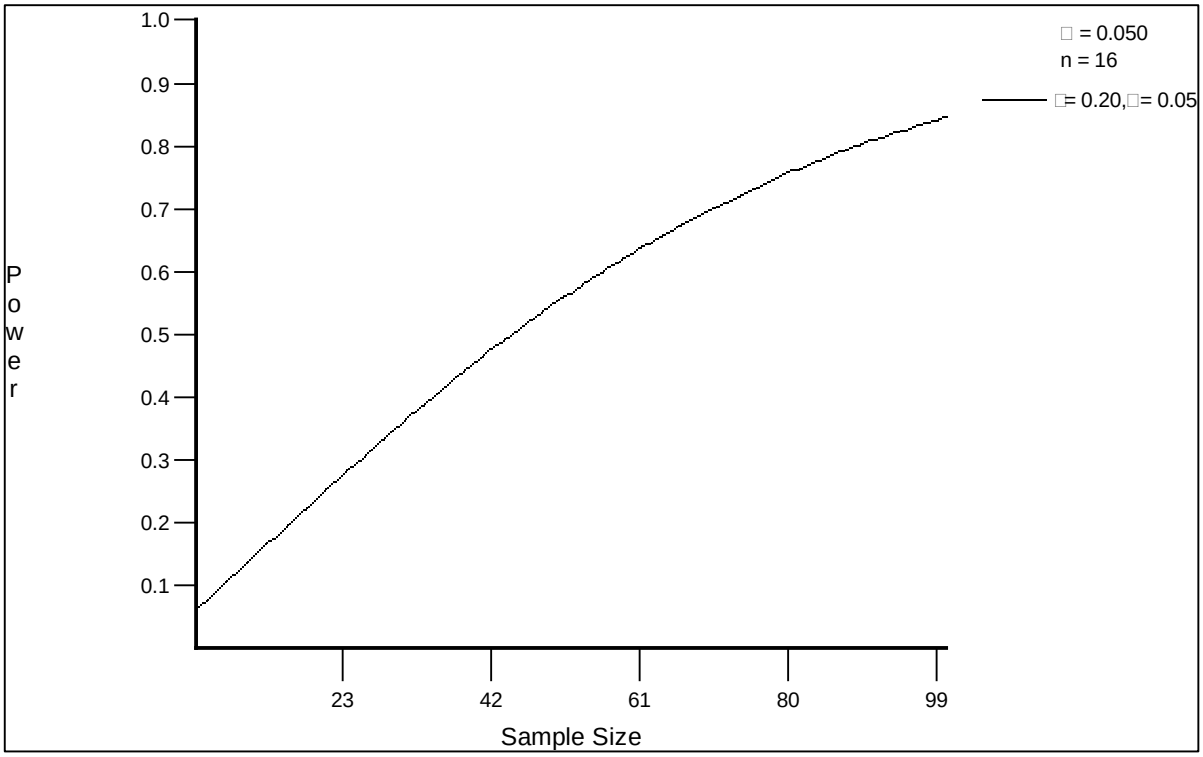

Figure 5.1. Power Analysis

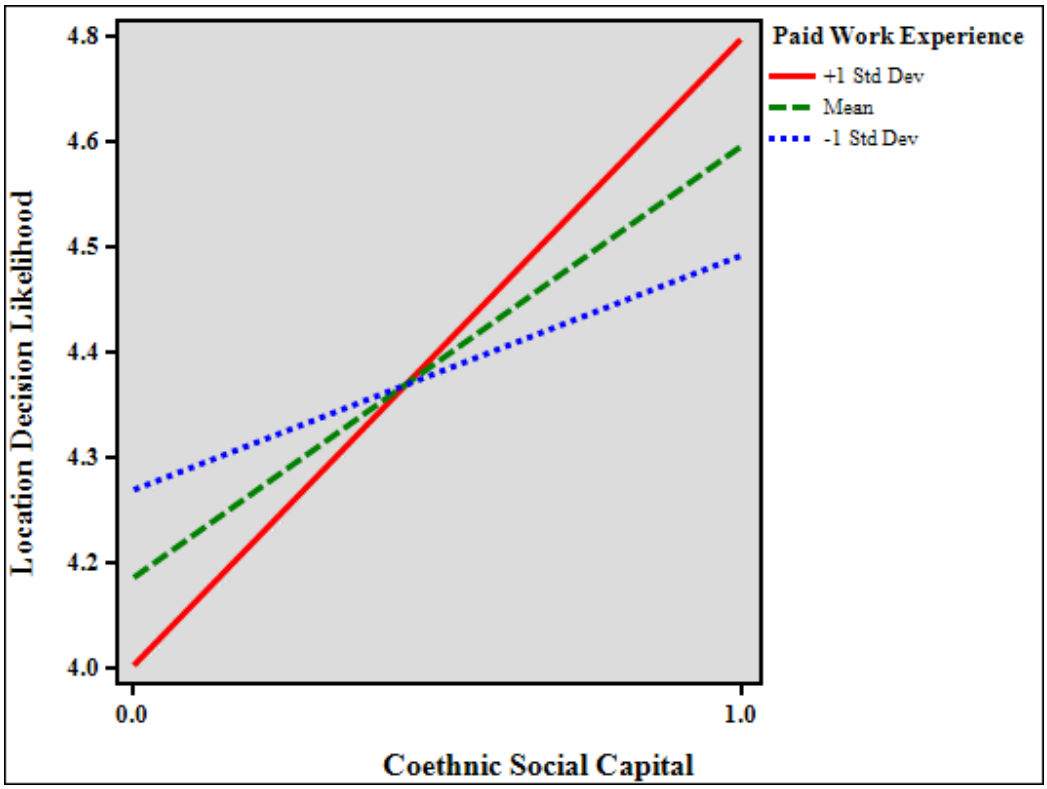

Figure 5.1. Moderation Effects (Coethnic SC x Paid Work Experience)

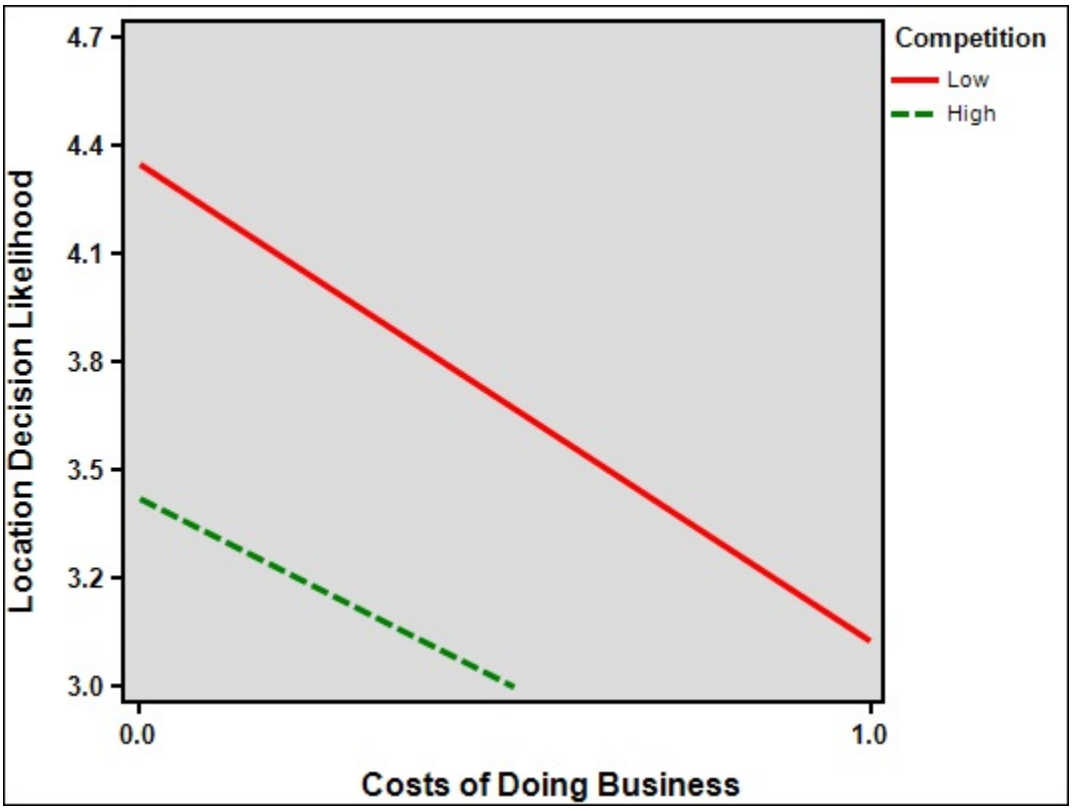

Figure 5.1. Moderation Effect (Costs of Doing Business x Competition)

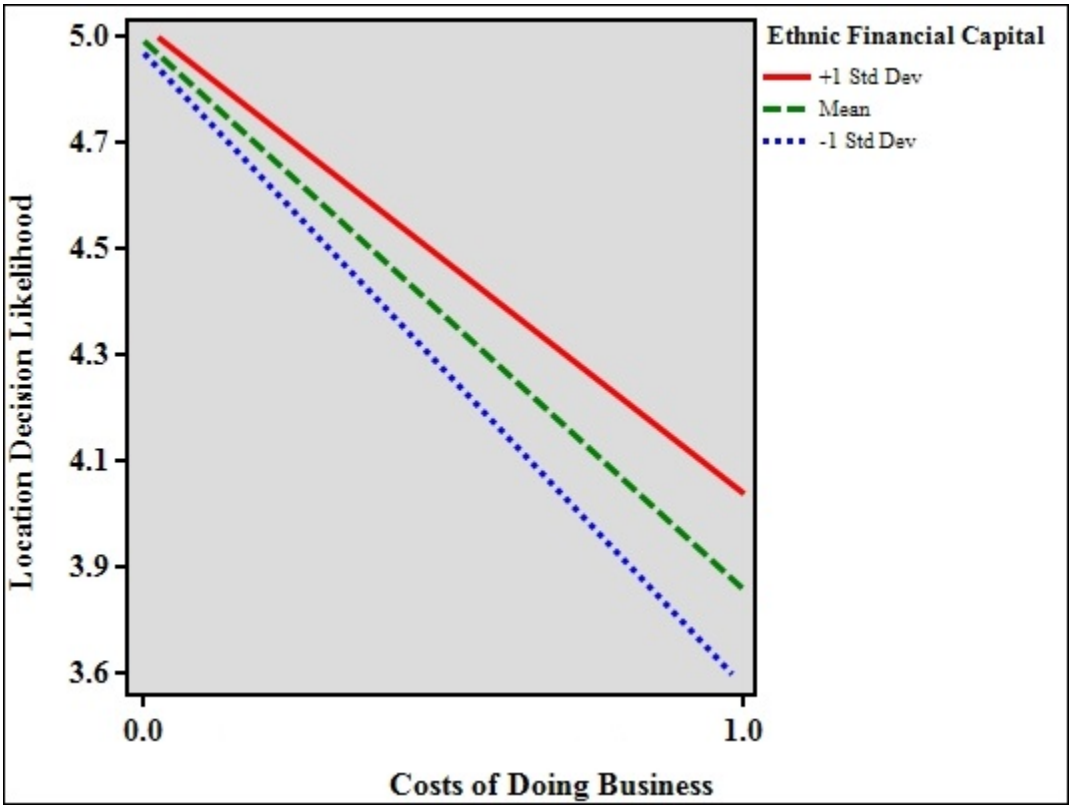

Figure 5.4. Moderation Effect (Costs of Doing Business x Ethnic Financial

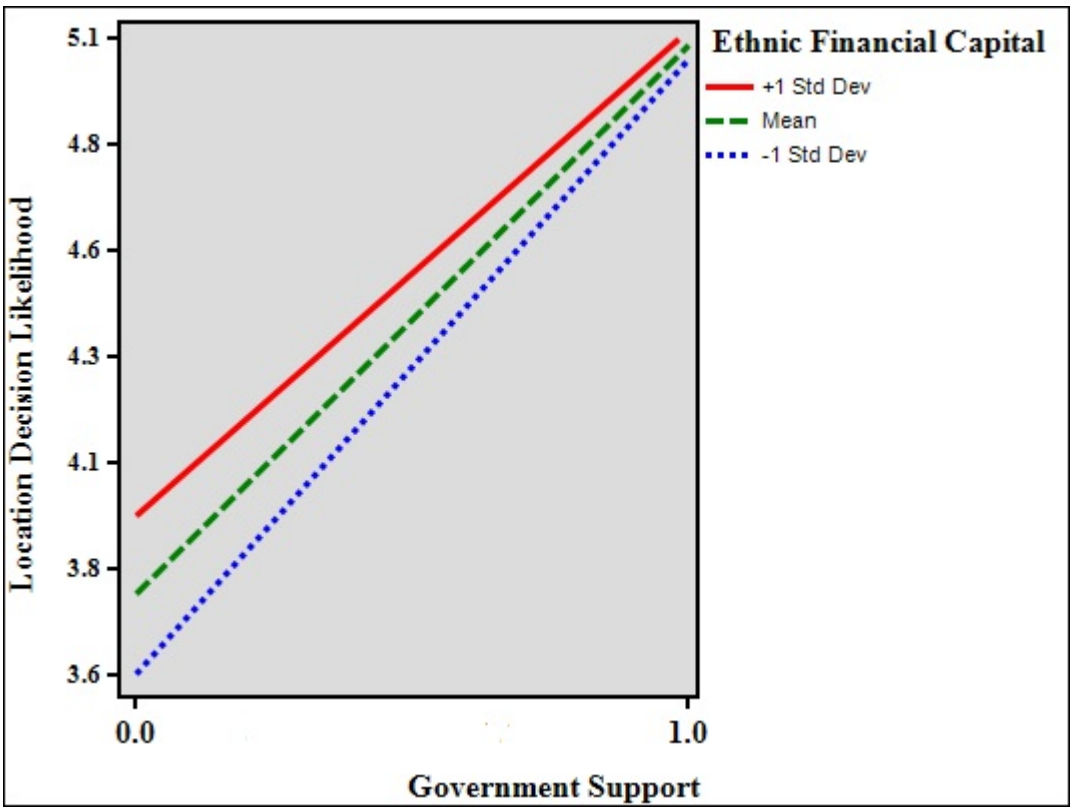

Figure 5.2. Moderating Effect (Government Support x Ethnic Financial Capital)

Vita

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